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ABSTRACT

A model for the levels of social interaction between author and reader provides a framework for examining the devices through which the author engages the reader. An important aspect of this model is the creation of additional levels of social interaction involving, for example, an "implied author" and an "implied reader." Newly created characters may in turn create additional levels of social interaction. Various devices, such as explicit embedding, commentary, and irony, are used by authors to create the various levels of a story and the interactions that will engage the reader. The successful layering of story features causes the reader to become deeply involved with the beliefs and intentions of the implied author and determines the latter's relationship with the implied reader. Layers of embedded stories, with corresponding implied authors and implied readers, complicate the task of the real reader; but this very complexity provides more characters that come alive for the reader and makes the reader care about what is being said. This is one clue to the effectiveness of story telling as communication: by inducing active involvement of the reader, the story form ensures that the reader is working at making the communication successful. (Stories used to illustrate use of the social interaction model include "Rip Van Winkle" by Washington Irving, "The Tale of Benjamin Bunny" by Beatrix Potter, and "The Turn of the Screw" by Henry James.) (RL)

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CENTER FOR THE STUDY OF READING

Technical Report No. 218

A SOCIAL INTERACTION MODEL OF READING

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Abstract

An author and a reader are engaged in a social interaction which depends on their goals and their beliefs about the world and each other. One aspect of this interaction is the creation of another level of social interaction involving an "implied author" and an "implied reader". The newly created characters may, in their turn, create another level of social interaction involving, for example, a "narrator" and a "narratee". Each level so created permits the creation of an additional level. A model for the levels of social interaction in reading is discussed in the paper. The model provides a framework for examining devices such as author commentary, irony, stories within stories, first person narration and point of view. Examples such as The Tale of Benjamin Bunny and The Turn of the Screw are discussed.

When my old friend Denis and I set out to explore the network of plans in "Hansel and Gretel" (Bruce & Newman, 1978) we relied on our common sense intuitions about real social interaction. Knowing that an enduring story must present believable, and therefore, somewhat accurate portrayals of people and their interactions, we made the rather rash assumption that we could model the interactions of characters in a story with the same tools we would want to use to model real social interactions. We felt that to some extent we were studying at least an abstraction of social interaction in general.

We knew, however, that a story was a special case, that we had as we said "to keep in mind the intentions of the author to make the story be a story" (p. 23). Why, for instance, did Hansel have to stop and turn around every time he dropped a pebble? A real person in such a situation would probably not have had to stop; we assumed that the author wanted Hansel to stop because that highlighted an important action and allowed the author to show us explicitly that Hansel's parents did not know what he was doing.

In other ways, too, the text shows the effects of contrivance (in the non-pejorative sense of that word). The story is clearly a fairy tale, even if it doesn't begin with "Once upon a time" Its status as a fairy tale determines the style of the language and the presuppositions one is encouraged or required to make in reading it. Thus, just as we

know not to expect a phrase such as " . . . my old friend Denis . . . " in the first sentence of a journal article, we have expectations about the language, the content, and the purpose of a fairy tale. As Bettelheim (1976) has shown, fairy tale characters fit well-understood stereotypes, such as "wicked stepmother," and the plot follows familiar patterns, such as having events occur in sets of three. For another genre we might have different expectations about the author's purpose or the use of stereotypes, but we would still need to interpret the text on the basis that it was written to achieve effects.

The notion that some structures of plot or character fit "Hansel and Gretel" better than others followed from our belief that it was not an unprocessed report of real social interactions, but a deliberate construction whose purpose was to make us build a particular model of the apparent interaction. Of course, in any social interaction (a discussion of this comes later) we would expect that the participants were also contriving and communicating by their actions. But here there was an added element, an author who had intentions beyond those of the characters.

Denis and I felt, then, that the author's role was a probable confusing factor for our analyses, a messiness in the data. We had to remember while doing our analysis that we were seeing actions contrived by the author to be as believable as real social interactions, but also intended to induce us to

construct interpretations that the author wanted us to construct. A story text, we had to remind ourselves, just like any other text, was a manifestation of someone's attempt to communicate, i.e., we were having our own social interaction with the author. But, in our quest for a model of character-to-character interactions, we had to push aside this all-embracing interaction between the author and the reader.

Of course, the author-reader interaction cannot be disregarded. What in the context of a study of character-to-character interactions appears as a problem to be pushed aside can become, under a different view, the object of study itself. New questions then arise: Are there two independent systems to analyze--the system of author-reader interactions and the system of character interactions? What are the differences between character interactions in a story and real social interactions? Where do we put the character who narrates; what kinds of interaction are implied by that narration? What is the relation of the author-reader interaction for narratives to that in other text forms? What is the relation of story-telling to other forms of communication?

This paper outlines a model of reading based upon some assumptions about the processes of reading and writing. The principal assumptions are the following:

1. Communication, regardless of its modality, is a special case of social interaction. In order to analyze it we need to start with a consideration of the participants' goals and beliefs regarding that social interaction.
2. Story-telling is a powerful means of communication and stories within stories have a special power. Much of what we call communication and even many of our apparently non-communicative activities are in fact modes of story-telling.
3. It follows from (1) and (2) that in a study of stories the starting point should be the elements of social interaction.
4. The reader's task is every bit as complex as the writer's and it makes similar demands on her or his creative processes. Meaning is not transferred, but made. (Sessions, 1950, makes a similar point regarding the role of the listener in music.)
5. The success of meaning-making in communication depends upon the use of good structures, that is, the mutual belief of the participants that smaller elements invoke larger mutually understood schemata. These schemata form the basis of the culturally defined notion of what a story is or can be.

6. Participants in any social interaction make meaning, just as a reader does. Using the concepts of good structures, they make stories out of these social interactions.
7. Because authors and readers are people engaged in social interaction, the author-reader relationship in narrative texts is not fundamentally different from that found in other types of writing.
8. To rephrase Shahn (1957), we need to be concerned with the content of shape, that is, the rhetorical or narrative forms and what they are intended to communicate.

An Example

To make these issues a little more concrete, let's look at a relatively simple example, the familiar story of "Rip Van Winkle" by Washington Irving, which raises issues of the interactions among the author, the reader, and the characters in a direct and engaging way. In a preface to the story Irving writes, "The following tale was found among the papers of the late Diedrich Knickerbocker," thus asserting that he, Irving, is not the author. As an "impartial" critic, Irving tells us that "there have been various opinions as to the literary character of his work, and to tell the truth, it is not a whit better than it should be. Its chief merit is its scrupulous accuracy . . . [It is] a book of unquestionable authority."

So then, we begin to read the true account of Rip Van Winkle's adventures as told to us by Diedrich Knickerbocker. Rip wanders off one day to the Catskill Mountains. There he comes upon a "company of odd-looking personages." They give him a drink which puts him to sleep for twenty years. When he awakens, he returns to the village, and begins to construct an account of his adventure for himself and the residents of his village: "I was myself last night, but I fell asleep on the mountain, and they've changed my gun, and everything's changed, and I'm changed, and I can't tell my name, or who I am!" We read that Rip becomes a storyteller: "He used to tell his story to every stranger that arrived at Mr. Doolittle's hotel." Though there are at first some doubters, we learn that "the old Dutch inhabitants, however, almost universally gave it full credit," that is, Diedrich Knickerbocker informs us that they did. Then, in a postscript, Irving quotes a note of Knickerbocker's that shows, Irving says, that the tale "is an absolute fact, narrated with his [Knickerbocker's] usual fidelity." In the note, Knickerbocker says, "I have even talked with Rip Van Winkle myself . . . [he was] so perfectly rational and consistent on every other point, that I think no conscientious person could refuse to take this [story] into the bargain . . . the story . . . is beyond the possibility of a doubt."

Rip Van Winkle tells a story to his fellow villagers, a country justice, and also to Diedrich Knickerbocker.

Knickerbocker writes the story; Irving discovers it and transmits it to us. I enjoy reading the story and appreciate the novelty of the format. But is it just a novelty? Why does all this structure exist? Why not just have the story itself?

One explanation might be that in certain periods of literary history ornamentation of this sort was expected as a stylistic device and that it had no important meaning for the author or the reader. Apparently following this line of reasoning, some anthologies (e.g., Huber, 1940) now omit the preface and postscript, as if, being out of fashion, they are best dispensed with. Carrying the argument further, we might say that embedded levels of story-telling are in general meant to be seen through; they may add interest but not content.

One problem with this view is that it doesn't explain why the "ornamentation" takes on a particular form, for instance, the emphasis on veracity. Irving refers to Knickerbocker's "scrupulous accuracy"; Knickerbocker describes Rip Van Winkle as "rational and consistent." These characteristics suggest a specific function for the so-called ornamentation: By having someone else tell the story, Irving can make the fantasy more credible. All he has to do is to get us to accept the assertion that there is a trustworthy historian named Diedrich Knickerbocker. Then Knickerbocker himself, who is conveniently dead at the time of Irving's preface, is responsible for the fantasy narrative. Knickerbocker, of course, pulls the same

trick when he claims to be a mere conduit for what is reported by Rip Van Winkle, a Dutch townspeople, or a country justice. These reports of reports become layers of deception that are quite effective in inducing, to use Coleridge's term, the reader's "willing suspension of disbelief." Thus, the levels provide support for the story itself.

But that is not all. If we look more closely at the text we begin to see that more is going on than just the presentation of a story. We become acquainted with Rip Van Winkle through a reading of the text, but we also meet Diedrich Knickerbocker and Washington Irving. Each of these characters can give us his perspective on the world and the events he is involved in. The levels of narration then become stories themselves. We shall see in examples to follow how interactions across levels are not only used to establish credibility for stories, but also to express irony, to suggest contrasts, or to examine questions such as the relation between fiction and reality.

Before we get into the general issues of rhetorical structure, though, let's return to the example to pull out some distinctions only alluded to above. First of all; although we have referred to the author as Washington Irving, we cannot know whether he accurately represents the views of the person, Washington Irving. That is, the author we see is really an implied author (using Booth's, 1961, terminology), who does believe Rip Van Winkle's story, regardless of what the real

Washington Irving believes. In fact, the implied author may be arbitrarily near to or far from the real author, providing the real author can write so as to disguise her or his own beliefs, language, and values. In any case, the implied author is not the real Washington Irving; similarly, I am not the implied reader. When the implied author writes, " . . . some years hence," I have to remember that the implied reader lives in the early 19th century, not the late 20th. Furthermore, I imagine an implied reader who is comfortable with the dialect of Irving's times and who shares the values and knowledge of a person living in the early 19th century U.S.A.

The implied conversation between the implied author and the implied reader finds parallels in the embedded levels of the story. Knickerbocker, the level two implied author, speaks not to me or to the implied reader, but to another personage, the level two implied reader. Since his story is being transmitted by Irving, we know that it is also being read by the level one implied reader, and, of course, the real reader, even though it is addressed to the level two implied reader. The implied conversation at level two is distinguished by the fact that it is purportedly in a dialect and a belief and value system of perhaps the late 18th century. Going further, we find that Rip Van Winkle, when he tells his history, becomes the level three implied author. He speaks to various level three implied readers, including Knickerbocker, the country justice, village

residents, and visitors to the village. Diedrich Knickerbocker is then both a level three implied reader and a level two implied author.

Finally, characters in the story told by Rip Van Winkle must communicate with each other. Although at times they may resort to explicit story-telling, they also imply stories by performing actions and making utterances that encourage observers to put these actions and utterances into larger structures, which give coherent accounts of the characters' plans and goals. Thus, the characters function as level four implied authors and their observers become the level four implied readers. These levels might be summarized as follows:

Level 0: The real author, Washington Irving, communicates with the real reader.

Level 1: The implied author writes to the implied reader.

Level 2: Diedrich Knickerbocker writes his "history" for his implied reader.

Level 3: Rip Van Winkle tells his story to Diedrich Knickerbocker.

Level 4: Characters in Rip Van Winkle's story tell stories to each other.

Each level of narration we find in "Rip Van Winkle" can be viewed as a conversation between some author and some reader.

Because each conversation comprises a structured set of events, and has, in effect, a plot, we can view the conversation as a story, a story told by the implied author at the next higher level. Let us now move on to lay out some of the characteristics of these multiple levels of stories.

Stories of Social Interaction

Each "level" of social interaction calls upon the reader to define the time, place, characters, and setting for that level. Thus, we view the social interaction between reader and author for any type of text and any level of social interaction as story-like. As in a story, events occur in a coherent, ordered fashion; there is a well-defined beginning, middle, and end. Furthermore, each interaction has its own time, place, and social setting, just as a story does. Conversely, it is useful to remember that a story is told by someone to someone with some purpose; story-telling is a form of social interaction. Thus, each level can be viewed as a story, and as a social interaction.

What are these "stories"? The first derives from the fact that the act of reading itself occurs in a social context. A person reads alone or in a group, or is read to by another. The real reader may or may not know the real author personally. The actual time and place of writing interact with the actual time and place of reading. As observers we can thus describe the act of reading as an interaction among characters such as the reader,

the author, the editor, the reviewer, the bookseller, the decoder (applied to one who reads aloud for others), the teacher, the librarian, or the tester, wherein a single person may play two or more roles at once. The resulting interaction, like a story, has its beginning, middle, and end. Like a story it can be described in terms of the interaction among the plans and beliefs of its participants..

A second story that is constructed in the event of reading concerns the social context that is implied by written communication. That is, any text, by virtue of its permanence, has a (Level 1) implied author and a (Level 1) implied reader, whose characteristics may match more or less to those of the real author and the real reader. For example, a friend might write a letter to me so that almost any reader of the letter would judge the letter's implied author to have the characteristics of my friend. On the other hand, someone who knew us both well might be able to forge such a letter so that in fact the implied author would be very different from the real author. Even in the case of a genuine and sincere letter, though, we cannot say that the implied author is the real author. Conventions of the language and constraints of the written medium cause the words of the text to differ from what the real author could say. Suppose, for example, that my friend's letter had begun "I was just thinking about you" For the implied author this phrase means, perhaps, that immediately prior to implied time of writing the

implied author was "thinking about [the implied reader]." The action the real author was "just" doing prior to the actual time of writing might have been to search for stationery and a pen. This discrepancy merely illustrates that the real and the implied authors live on different time scales. In fact, they also live in different places and different social worlds. In the case of a letter such discrepancies usually pass unnoticed; in the case of formal writing they lay the basis for irony and other rhetorical devices. In any case, the implied social interaction between the implied author and the implied reader is its own story within the story of the interaction between the real author and the real reader.

The meaning constructed on the basis of the text by the implied reader can be a simple accounting of events or set of facts, but often it includes the message: "Someone else is saying this." A character may describe her or his adventures to another character; the implied author may come across a forgotten text (as in the Rip Van Winkle example); or the implied author may effectively introduce another implied author through irony. The new speaker is called a "narrator" if the implied communication is spoken; otherwise, she or he is what we might call an "implied implied author." These new characters speak, not to the real or implied reader but to yet another character, the "narratee" (cf. Prince, 1971) or the "implied implied reader," respectively. For simplicity, regardless of the medium

of communication, we will refer to the speaker at Level 2 as the Level 2 implied author and the listener as the Level 2 implied reader. Thus we have a third level of social interaction created as a result of the communication at the second level. The interactions among the new characters occur in their own place, time, and social setting; they determine the third story for a single text.

The story told at Level 2 can be about characters who have the need to communicate. These characters will then resort to the same device, namely, story making, that is used by the real author, the Level 1 implied author, and the Level 2 implied author above them. Their stories demand readers, and can, again, be about people and their social interactions. Thus the level creating activity is self-renewing. The Level 3 story can give birth to a Level 4 story, which can contain a Level 5 story, and so on.

The process of embedding levels is indefinitely extensible, and more commonly invoked than one might suspect. There can be explicit signals for the creation of subsequent levels, and, as we shall see, levels can also be induced by a variety of apparently unrelated rhetorical and narrative devices. Before we go on to examine the consequences of the embedding phenomenon, it will be useful to develop some notational devices. These devices will enable us to refer more easily to the stories created at each level. Moreover, they allow us to see the overall rhetorical structure in a single graphic representation.

Aspects of Social Interaction

The decision to view an activity as a social interaction entails a set of questions about that activity which condition thereafter what we can say about it. These questions suggest the way to describe a particular instance of social interaction, including the interactions among authors, readers, and characters. There is not room enough here to give a full discussion of the basic questions one might consider. Instead, we will discuss here a few central issues in order to suggest what is needed for a complete analysis of social interactions, with a special emphasis on rhetorical relations. See also Ervin-Tripp and Mitchell-Kernan (1977), Goffman (1969, 1974), Harre and Secord (1973), Heider (1958), and Sudnow (1972).

Participants

One question to ask about any social interaction is a simple one: Who are the parties engaged in the interaction? Related to this rather obvious question is a more subtle one: What social roles are the various participants taking upon themselves, and how do they each perceive the others' roles? For the case of communicative interactions, the taking on of roles can become quite involved, since a participant may say one thing to imply another, even its opposite. Furthermore, a participant in a social interaction at one level may, in addition to his or her role at that level, take on a different role in an embedded

level. We will return to this point in the discussion of persona below.

Time

A second rather obvious question to ask is this: When does the interaction occur? Again, the simplicity of the question belies the complex effects of time on communicative interaction. Time is a particularly important factor in written communication, where the time of writing may differ significantly from the time of reading. This is a peculiar property of written text: it permits social interaction without simultaneity.

To illustrate the richness of the temporal system that is invoked in writing, consider the following example. On October 2, 1979, Pope John Paul II spoke to the United Nations General Assembly. His time of speaking can, if we ignore the role of the interpreters, be considered to be nearly identical with the time of listening by representatives in the Assembly. But his address was also reprinted in the The New York Times along with commentary on it. Following is a portion of what the newspaper printed:

Following is a transcript of the address by Pope John Paul II to the United Nations General Assembly yesterday, as recorded by the New York Times:

Mr. President, my address today will be published in its entirety just as I wrote it. Because of its length, however, I shall now read it in a shortened form.

When I read the address on October 3, I had to remember that the time of speaking, referred to by "today" and "now," was October 2, not October 3. Thus, the implied time of receiving (listening to) the address differed from my actual time of receiving (reading) the address. (Of course, the implied reader, a representative in the General Assembly, did not match the actual reader either.) At the same time, I knew that the implied time of reading the commentary, for instance, the introductory sentence given above, which starts with "Following . . . ," was the same as my actual time of reading it. On the other hand, as I now re-read the excerpt, I know that the implied time of reading is no longer the same as the actual time.

To complicate matters, I can recognize times of speaking and writing as well as times of listening and reading. For example, the actual time of speaking was October 2. It is probable that the commentary was written on October 2, also, but the implied time of writing for the commentary is October 3, as evidenced by the writer's use of the word "yesterday". Also, I infer from the Pope's first sentence that his address was actually written well before the spoken address was given. The written version that he

read aloud has its implied author, and perhaps a different real author or authors. Its implied time of writing has to conform to the date of the spoken address, even though as a real reader I believe that its actual time of writing was prior to October 2.

Now, to make things worse, the reader of my paper has to keep track of the Pope's actual time of speaking and listening, three implied times of writing, and three implied times of reading. Furthermore, you may wish to consider what the actual times of writing might be and what their relation would be to the implied times and to your actual time of reading. A major task for the reader is to decide what aspects of this network of times are worth disentangling, and then to compute the appropriate relationships.

The interactions of the times in this example are only indicative of what can happen in a full text. Typically, many events are described in a text, each with their time of occurrence and possible reference times (Bruce, 1972; Reichenbach, 1947). Furthermore, the times of reading and writing are really time series. Interactions are then established between the time series of the authors, the readers, and the events, permitting flashbacks, repetitions, summarizations, and so on. A good description of some of these interrelationships can be found in Chatman (1978).

Other Communicative Dimensions

Related to the question of time is one of location: Where does the interaction occur? For communicative social interactions we may note that just as there can be actual and implied times of writing and reading, there can be actual and implied locations for writing and reading. In fact, for communicative interactions there are a number of other dimensions that need to be considered in a complete description. Eight of these are summarized in Table 1 and a full discussion may be found in Rubin (1978) or Rubin (1980).

Plans and Beliefs

Finally, to conclude this unfortunately incomplete sketch of the aspects of social interactions, we consider what may be the most significant ones for a theory of rhetoric, namely, the possible relations among the plans and beliefs of the participants. In order to exemplify the problem, let's focus on an author and a reader as two participants in a communicative social interaction. We might give the following characterizations of their basic goals in the interaction:

Simple form of author's goal: Create a text, which, when read by the reader, will allow her or him to construct an accurate model of the author's meaning.

Table 1

Some Dimensions of Communicative Social Interaction

<u>Dimension</u>	<u>Central Question</u>
modality	Is the message written or spoken?
interaction	In what ways are the participants able to interact?
extra-linguistic communication	Can the participants communicate by gestures, touch, etc.?
concreteness of referents	Are the objects and events discussed visually present for the participants?
separability of participants	Are the distinctions among different participants' statements and points of view clear?
time	When does the interaction occur? (see text)
location	Where does the interaction occur?

Simple form of reader's goal: Read the text and construct a model of the author's intended meaning.

These characterizations are useful as far as they go, but they fail to capture the fact it is, rarely, if ever, desirable, or even possible, to express a meaning in full. At best, an author can give clues to her or his meaning, presuming all along that the reader will be an active participant in constructing a suitable model. The author is aided in this endeavor by a further presumption: the social act of written communication presupposes a contract between the author and the reader to work within concepts of good structures (see Adams & Bruce, in press). That is, the belief that the clues point to something coherent allows the author to suggest, rather than elaborate (or "show", rather than "tell"), and points the reader's inferences in fruitful directions. Thus, the author expects that the reader will try to construct a good structure which may indirectly represent the author's meaning. The reader expects to take on the task of establishing such a good structure. This leads us to a reformulation of the author's and reader's goals:

Good structure form of author's goal: Create a text, which when read by a reader will allow her or him to build the appropriate good structure.

Good structure form of reader's goal: Read the text and build a good structure.

These characterizations can be refined further, for we know that the author and the reader can each expect that the other is aware, just as we are, of the good structure contract. Knowledge of their mutual awareness means that the two can empathize with each other's task, and further, can each recognize that the other is also empathizing. The awareness of each other's awareness can be iterated to any level (but see Cohen & Perrault's, 1979, discussion of mutual beliefs). This means, on the one hand, that relations between the author and reader can be arbitrarily complex, including for example, disguising of endings, deception, and surprise (Fowles, The Magus), but on the other hand, that the two may establish a rich and intricate relationship which leads to eventual fulfillment of the good structure contract. These observations point us to a final reformulation of the participants' goals:

Empathetic form of author's goal: Create a text, which, when read by a reader who has the goal of establishing a good structure and the knowledge that the author is aware of the reader's goals and beliefs, including the reader's knowledge of the author's goals and beliefs, etc., will allow the reader to build the appropriate good structure.

Empathetic form of reader's goal: Read the text, and knowing the author's goal as described above, build a good structure.

As this description should imply, the social interaction between the author and the reader can reflect a complex interplay among their plans and beliefs. Sometimes the communication is direct and simple, while at other times it may be temporarily misleading or deceptive. A classic example of this is Hawthorne's "Young Goodman Brown", in which the reader is led to believe that the good structure is of a form quite different from the final one suggested by the author. First, the reader feels that Goodman Brown is engaged in some nefarious plot. Then he seems to be in one of those familiar struggles with the devil, as in "The Devil and Daniel Webster." The final twists resolve into yet another good structure, a complex one which builds upon the reader's knowledge of the earlier false constructions.

The intricacies of author-reader interactions find parallels at embedded levels when characters in a story become explicit authors and readers themselves. But even when participants are not speaking or writing to each other, communication occurs by virtue of the fact that the participants interpret each other's actions, putting them, as we have said, into stories as well as if descriptions of them had been read by a master orator. We cite here an example from a story involving deception. The

participants act so as to induce other participants to construct stories that give misleading explanations of events.

The example is actually a case of double deception. It occurs when one participant deceives by pretending to be deceived by another participant. In Grimm's "Hansel and Gretel," Hansel's parents pretend that they are taking the children on an ordinary wood-fetching expedition, when, in fact, they are taking the children into the woods to abandon them (Bruce & Newman, 1978). This constitutes a simple deception. But Hansel learns the parents' plan, and, in order to counter it, pretends to be deceived while he in fact is carrying out his real plan, which will counter their real plan. His pretense then becomes a double deception, because it induces the parents to construct a story in which Hansel has been tricked by them into constructing his own inaccurate account of their actions.

We have talked here of author-reader and character-character interactions. As intricate as these may be, they are only part of what makes a story work. Among other things, we need to consider not just the social interaction between participants at a single level, but also the meaning conveyed by a set of levels, and even by interactions across levels. This requires some background on a model of rhetorical structures.

The Representation of Rhetorical Structures

In order to discuss the various rhetorical structures one may encounter, it is helpful to have some terms, symbols, and graphic representations for the relationship among the participants at each level of interaction. The diagram system presented in this section is intended to express the major features of each social interaction as suggested by the dimensions outlined above. Since our main interest is in the communication aspect of the interaction, the diagrams emphasize the author, the reader, and the meanings they construct.

Terminology

Although at some levels of the rhetorical structure the author may in fact be speaking, rather than writing, it is convenient to think of the communication process as being similar in the two situations. Thus, for each level of embedding there is either an author and a reader, or a narrator and a narratee. Because the roles of implied author and narrator or of implied reader and narratee differ essentially on the (implied or real) modality of communication alone, we will use the same symbols to represent them. Similarly, a character who takes on an implicit narrator or narratee role by the communication of a plan will also be represented by these symbols. The producer of the communication at Level i will be symbolized, A(i). A(2), might, for example, denote a Level 2 narrator or a Level 2 implied

author. $A(0)$ denotes the real author. Similarly, $R(i)$ represents the receiver of the communication at Level i . In a similar way we indicate the physical text, the time, and location of the social interaction. These symbols are summarized in Table 2.

It is useful to represent the distinction between a person and that person's role in an embedded social interaction, particularly the implied interaction that arises in telling a story. We write a name in quotes to indicate that the person referred to is not the real person but the persona created in the act of story telling. This is necessary, for instance, to distinguish between Washington Irving, the person, and "Washington Irving," the implied author of "Rip Van Winkle." Finally, we need to represent whether participants are engaged, or involved, in the next level of social interaction. This is shown by adding an asterisk after the appropriate symbol, e.g., $A(i)^*$ would indicate that the persona of author at Level 1 appears in the embedded narrative at Level 2.

Reader's Beliefs

We are generally interested in the meaning constructed by the participants in a communicative interaction. What these meanings really are, and how they relate, can be known only by a truly omniscient observer. A more interesting case is that of the observer with limited knowledge, in particular, one of the

Table 2
 Terms for the Elements of a
 Communication Interaction at Level i

<u>Element</u>	<u>Producer of Communication</u>	<u>Receiver of Communication</u>
participant	<u>A(i)</u>	<u>R(i)</u>
meaning	<u>M(A(i), j), j > i</u>	<u>M(R(i), j), j > i</u>
time	<u>T(A, i)</u>	<u>T(R, i)</u>
location	<u>L(A, i)</u>	<u>L(R, i)</u>
physical text	<u>TEXT(i)</u>	<u>TEXT(i)</u>

participants, either the real author or the real reader. In most of this paper we focus on the real reader's point of view.

For the purposes here, it is useful to factor the meaning that is constructed by the reader into two components: beliefs about the communication itself, including the beliefs and purposes of the author, and beliefs about the information being communicated. This cannot be made into a rigid distinction, but it does allow us to focus on one aspect of the meaning or the other. Its usefulness is most apparent when we look at embedded stories. The communication is then the telling of a story, whereas the information being communicated is the story itself. Chatman (1978) makes a similar distinction when he speaks of "discourse" and "story," respectively.

The different meanings that the reader constructs can now be represented using the concept of levels. The reader at one level of social interaction constructs a meaning for that level. This meaning may include embedded levels. If so, meanings are constructed for each of the embedded levels as well. Thus, we can speak of, for example, the meaning constructed by the reader at Level i for Level i or for any level embedded within Level i . The full meaning that the reader at Level i constructs is represented by $M(R(i), i)$. It contains the reader's model of her or his social interaction with the author at Level i , including a model of the author's beliefs and intentions. The portion of $M(R(i), i)$ that is the "content" of the text is represented by

$M(R(i), i+1)$. Note that this is only the content as the reader has constructed it; it is not an inherent property of the text. An embedded story within $M(R(i), i+1)$ is represented by $M(R(i), i+2)$, and so on. (An analogous set of symbols is used to represent the meaning constructed by each author for each level; see Table 2.)

Representation of One Level of Interaction

Using the rhetorical symbols defined in Table 2, we can begin to construct a representation for one level of a rhetorical structure. The full rhetorical structure representation for a communication is then built up by embedding one-level structures. Figure 1 shows a portion of a one-level rhetorical structure, namely, the interactions at Level i between an author, $A(i)$, and a reader, $R(i)$.

The figure indicates that the time of writing was $T(A, i)$ and the time of reading was $T(R, i)$. Similarly the location of the writing was $L(A, i)$ and the location of the reading was $L(R, i)$. The arrow from $A(i)$ to $TEXT(i)$ symbolizes the process the author engages in when producing a text. The arrow from $TEXT(i)$ to $R(i)$ symbolizes the process engaged in by the reader when creating an interpretation of that text. Neither arrow is intended to symbolize "movement of meaning from mind to text" or the like. In fact, "meaning" should only be interpreted as a construction within the set of beliefs of a participant or an observer of the social interaction.

In most cases we will use an abbreviation for the structure shown in Figure 1, removing the indicators for time, location, and the physical text. Also, since in our discussions we will almost always take the reader's point of view, it will be convenient to take as given that the narrative structure indicated is a construction within our (or the observer's) beliefs about the reader's beliefs. The abbreviated structure is shown in Figure 2.

Nested Stories

The major rhetorical features of a text can now be given a pictorial or diagrammatic representation (see Figure 3). Each diagram is based on a set of nested boxes, representing the various levels of embedding of implied communication. The outermost box represents the communication from a real author, $A(0)$, to a real reader, $R(0)$. Succeeding levels of the rhetorical structure are represented by nested boxes, each of which is numbered in the upper right corner. Thus Level 1 represents the communication from the implied author, $A(1)$, to the implied reader, $R(1)$. The innermost box represents events or ideas as presented by the last implied author.

At each level the communication from author to reader is represented by an arrow from speaker to hearer. A dashed arrow points to the next embedded box (representing the next level of the rhetorical structure). This means essentially that the

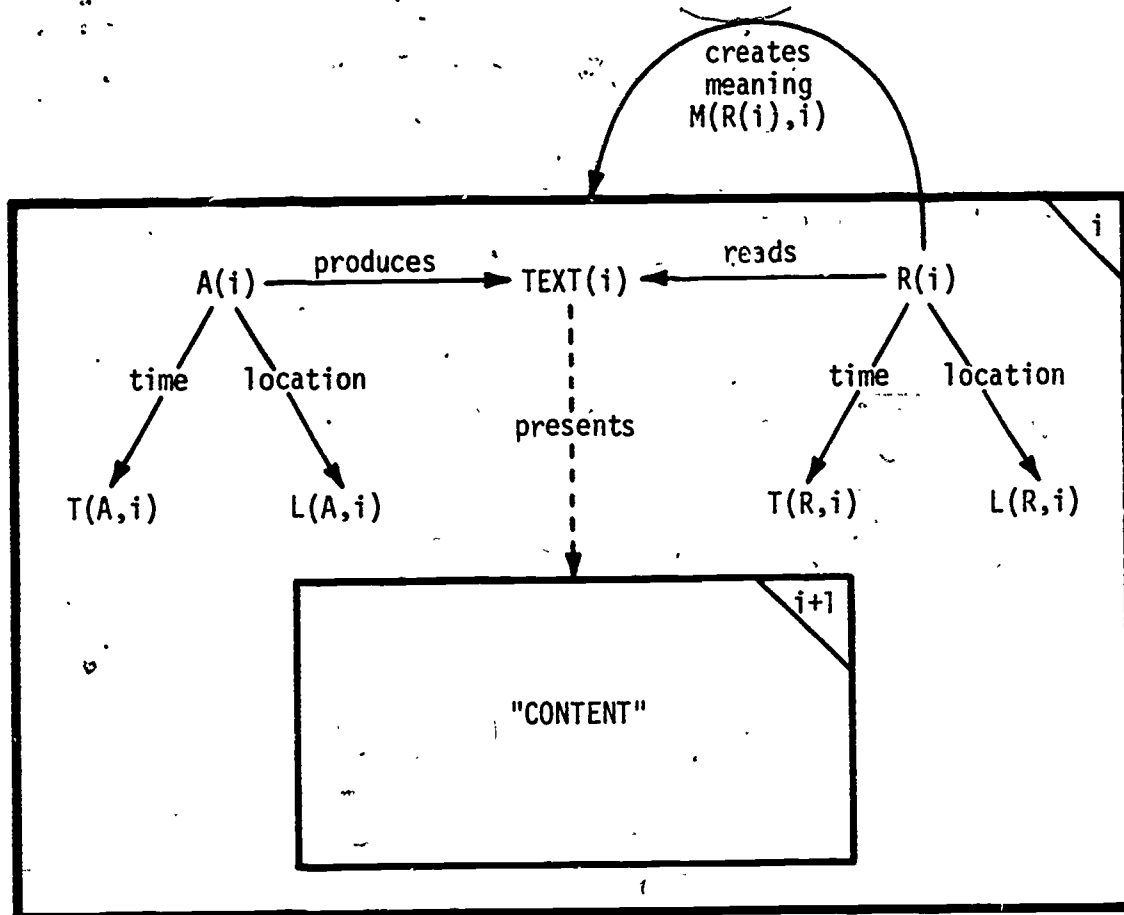


Figure 1. One level of an abstract rhetorical structure, showing the basic elements.

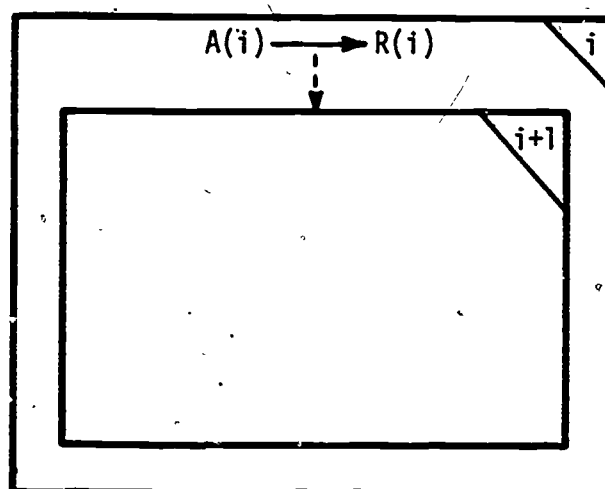


Figure 2. An abbreviated representation of one level of a rhetorical structure.

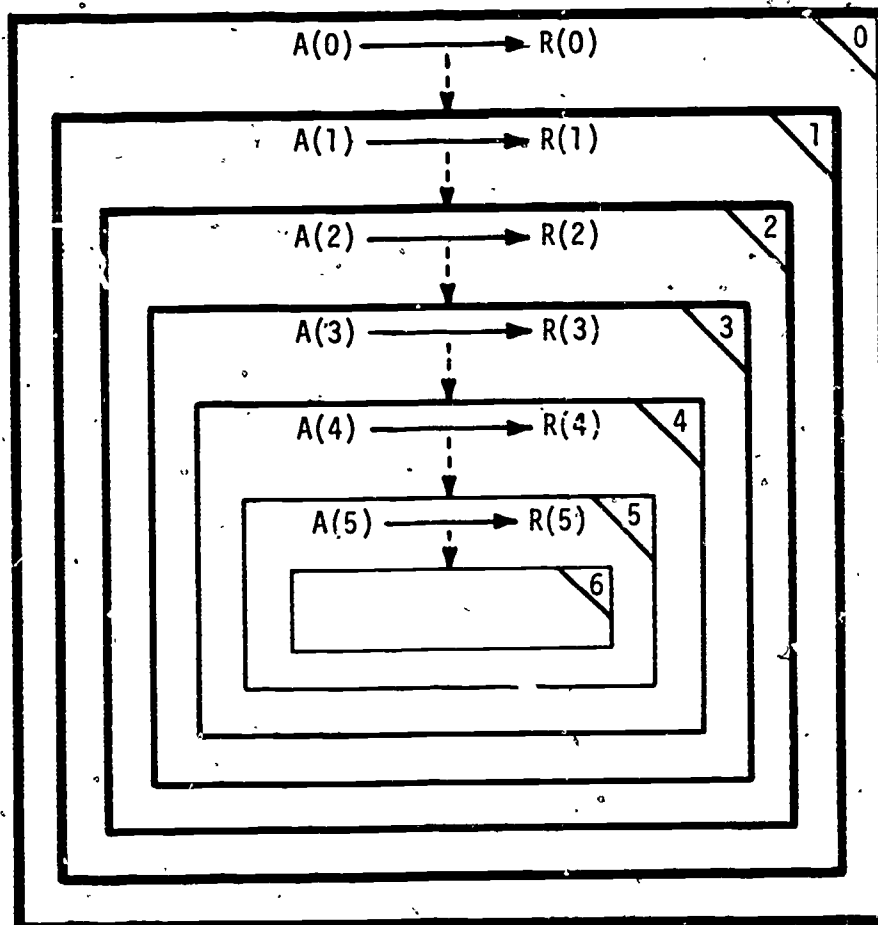


Figure 3. A multi-level rhetorical structure (using the abbreviated representation).

reader has constructed the next level of narrative on the basis of the communication at the higher level.

Using this notation, we can represent the skeleton of an actual narrative. For example, a portion of "Rip Van Winkle" has the structure shown in Figure 4. The figure reads as follows: Rip Van Winkle is the narrator of the Level 4 story (for simplicity here we will ignore the fact that numerous characters in the Level 4 story also effectively narrate stories). He also appears as a character in the story he tells. The implied author of the text that presents Rip Van Winkle to us is Diedrich Knickerbocker; his persona is the narratee for Rip Van Winkle's story. Knickerbocker's text is embedded in the story written by "Irving," i.e., Washington Irving's persona. Finally, the entire structure is a manifestation of the communication from the real author, Irving, to a real reader.

Basic Rhetorical Forms

We consider in this section five basic rhetorical forms and in the next section eight devices for the composition of the basic forms. Repeated application of devices can generate an indefinite number of embeddings. The basic forms presented here can also be found as the primary elements in the simplest possible rhetorical structures for written text. Such structures have three levels: Level 0 is for the real author-real reader interaction; Level 1 is for the implied author-implied reader

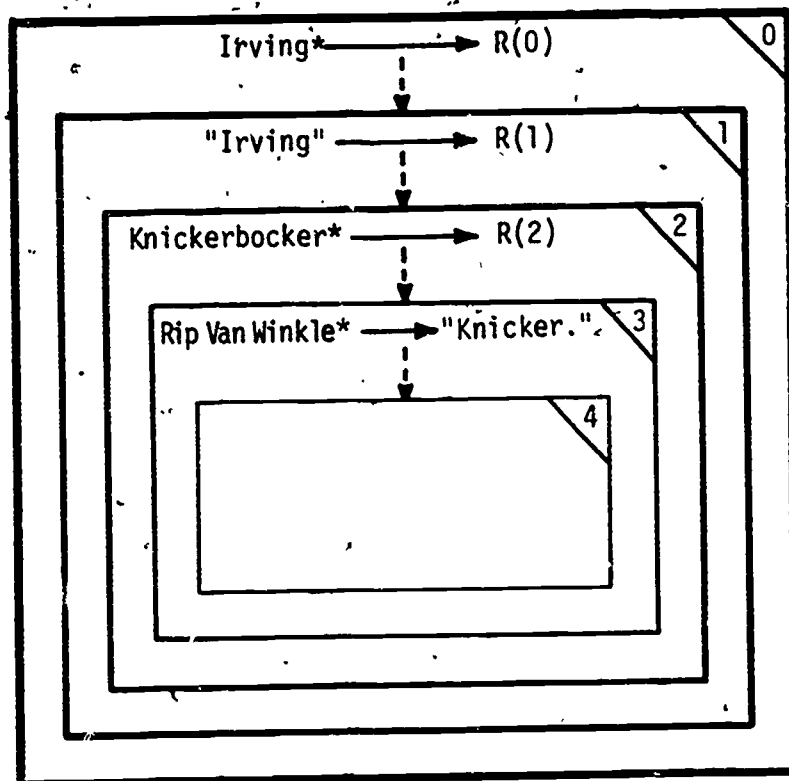


Figure 4. The rhetorical structure for Rip Van Winkle (W. Irving), showing the use of explicit embedding.

interaction, which takes one of the five basic forms; and Level 2 is for the "content" constructed by the real reader. The five "simple" structures are shown in Figure 5.

Argumentation

The first basic form is a direct communication from the implied author to the implied reader. Most often, this communication consists of an argument that the implied author is making to the implied reader. Since both are involved in the argument, we symbolize the interaction as follows:

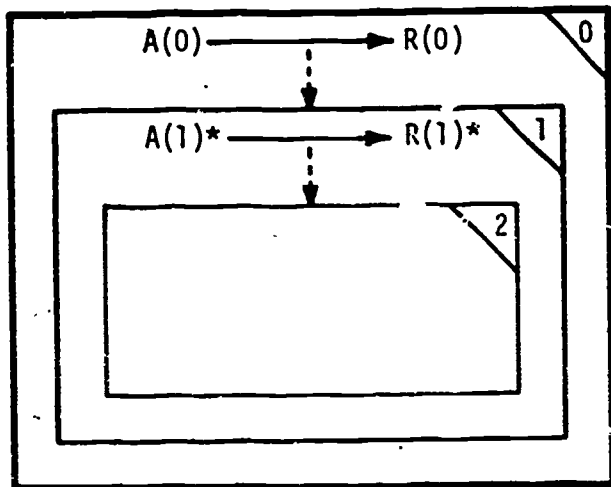
A(1)*----->R(1)*

An article in a journal (e.g., Discourse Processes) would have such a structure. Characters in stories may also engage in implicit argumentation with each other via communication of their plans, but since the existence of the characters implies an additional level of rhetorical structure, we discuss this in the section on devices.

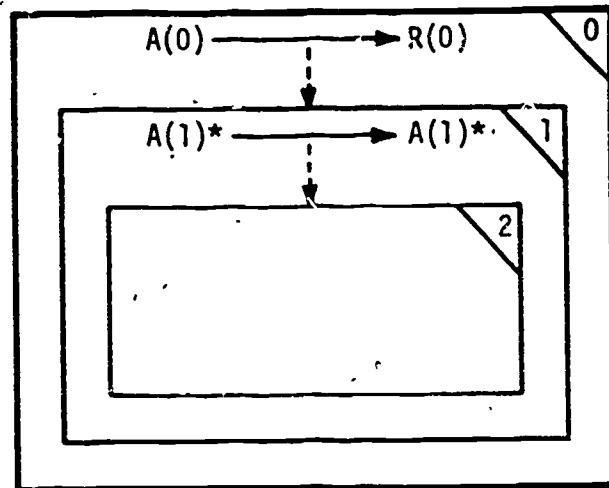
Diary

The second basic rhetorical form, the diary, is a story told by the implied author to himself or herself. This form would be found in the structure for a real diary, but also in a story wherein the main character's thoughts and feelings are so much in focus that she or he in effect narrates the story. It has the following representation:

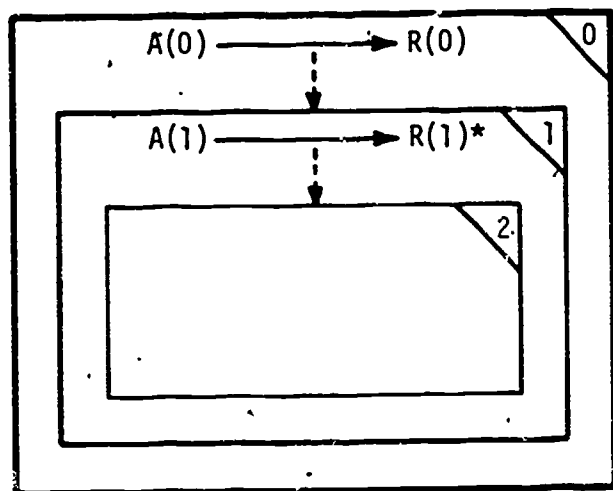
A(1)*----->A(1)*



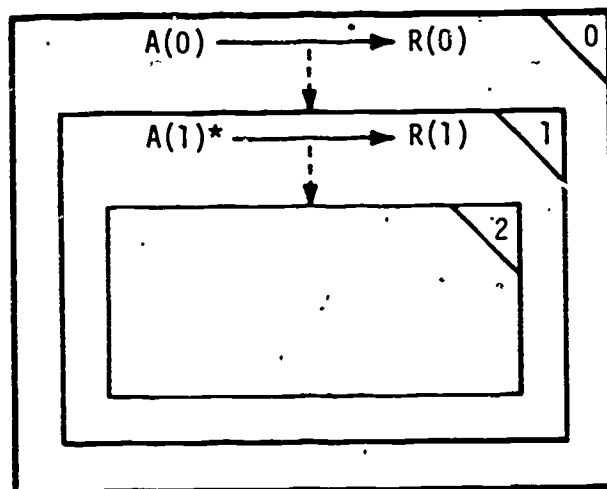
Argumentation



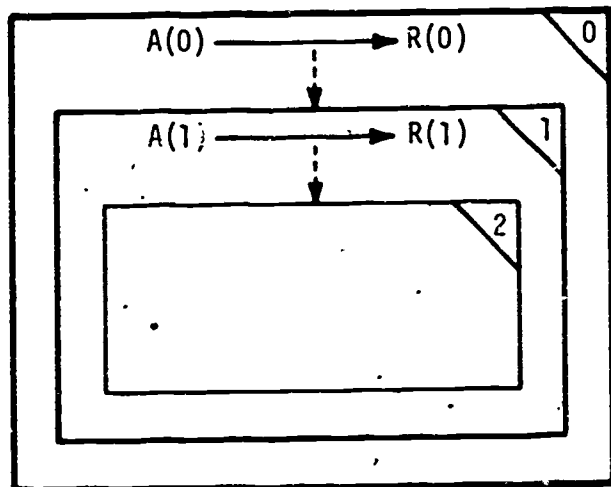
Diary



Reader Immersion



Participant Account



Observer Account

Figure 5. The five basic rhetorical forms in the simplest possible (i.e., three-level) structures.

Reader Immersion

An unusual, but important, basic rhetorical form called reader immersion puts the implied reader into the story. It is the typical form for written instructions, and is also found in books such as Packard's Sugarcane Island and Deadwood City. These books are designed to engage the real reader by having the implied reader be the main character. The real reader is allowed to choose at various points the path the plot will take. (If you decide to walk along the beach, turn to page 5; if you decide to climb the rocky hill, turn to page 6). The representation for immersion is

A(1)----->R(1)*

Participant Account

A participant account is the fourth basic form. Like a diary, it is told about and from the point of view of the implied author. However, it is told to an implied reader who is explicitly not the implied author. Thus, while it maintains closeness to the implied author, it also suggests the notion of the "story" as separate from the life and thoughts of the author. Its representation is

A(1)*----->R(1)

Observer Account

An observer account is like a participant account except that the implied author is not a participant in the actions

described. This is a widely used form which has the representation:

A(1)----->R(1)

One variety of observer accounts is used for story-telling. It is here that we see a place for the traditional point of view categories (Perrine, 1966): objective, omniscient, and limited omniscient. The objective structure keeps the implied author distant from the story and limits inside views of the characters. This can also lead to minimum involvement for the implied reader, who has at most a shallow insight into any character's thought, feelings, or other psychological states. An omniscient account gives the author greater freedom by permitting an inside view of any or all characters. As such it is often used to illuminate conflicting intentions and perceptions in stories involving deception, such as "Hansel and Gretel," in which the reader has insight into Hansel's motivations and beliefs as well as his parents'. Generally speaking, the omniscient form allows more reader involvement than the objective account, but not much more since shifting from one character to another limits involvement with any one. By allowing inside views the omniscient account also moves towards an additional level of embedding. We begin to see actions as particular characters see them, and do not have to accept just the view of the implied author. The limited omniscient account moves another step closer to an additional embedding. Here the author is limited to one inside view and one

character's point of view. Thus, the implied author is almost reduced to an intermediary between the central character and the implied reader. We see the story as the character sees it and become more involved with the character's adventures. A fourth point of view type could be imagined from the extreme extension of limited omniscience so that the primary character in effect narrates the story (see Booth, 1961, for a discussion of Strether's role in The Ambassadors). This is discussed in the next section as the device of in-effect narration, since it implies the creation of an additional level.

Another variety of observer accounts is used for giving an exposition or an overview of a situation. Examples of this are found in school history texts (see Fitzgerald, 1979), or perhaps, encyclopedias. Exposition is similar to argumentation, but it implies a less direct involvement of both the implied author and the implied reader. That is, in argumentation we focus on the intention of the implied author to influence the implied reader; in exposition we focus on the purportedly disinterested presentation of a body of information. Viewing a level one structure as an exposition rather than as an argumentation commits us to treat the message as somewhat independent of the sender and receiver.

Devices Which Create New Levels

Examples of explicitly embedded stories are much more prevalent than one might suspect at first; but what is more interesting is the fact that phenomena as diverse as author commentary, dramatic irony, narration, point of view, and cooperation and conflict among characters can be understood as devices that effect the creation of embedded stories. We will refer to the embedded level created by a device as "Level $i+1$ " and the last level prior to application of the device as "Level i ". There are constraints on which basic forms can appear at Levels i and $i+1$ after application of a device. These are discussed for each device and then summarized in Table 3. Let us consider the eight devices in turn, beginning with explicit embedding, and moving toward character-to-character interaction.

Explicit Embedding

The simplest case of embedding is explicit embedding, a device by which the implied author simply introduces another text. We have already discussed one example of this, "Rip Van Winkle," in which "Irving" introduces a text supposedly written by D. Knickerbocker. Other forms of explicit embedding arise from the discovery within a text of diaries, letters, books, secret manuscripts, tablets, or other written documents. The form at Level $i+1$ can then be any of the five basic forms; Level i is typically observer account.

Commentary

The second device for adding a story level is commentary by the author, as when the implied author in Benjamin Bunny says, "I cannot draw you a picture of Peter and Benjamin underneath the basket, because it was quite dark. . . ." Although it is sometimes difficult to draw the line between commentary and the necessary role of the implied author as a describer and reporter (see Booth, 1961), it is clear that when the reader feels that commentary is occurring, he or she also begins to feel the implied author as a character. In the example, we begin to see Potter's persona as a character in a story about the writing of The Tale of Benjamin Bunny. That story has its own implied author, that is, we recognize the presence of the one who has written so as to have us create the character who writes stories about rabbits. The structure is shown in Figure 6 (ignoring for the moment that Peter tells a story to Benjamin). Here, "Potter" represents the character ("Potter"'s persona) who is created by the use of commentary. Commentary places few, if any, constraints on the basic forms at Level i or Level i+1.

Irony

Irony is a third rhetorical device that has among its effects, the addition of a level of narrative. That is, when we recognize that the implied author or the narrator is saying something that is intended to be interpreted as naive,

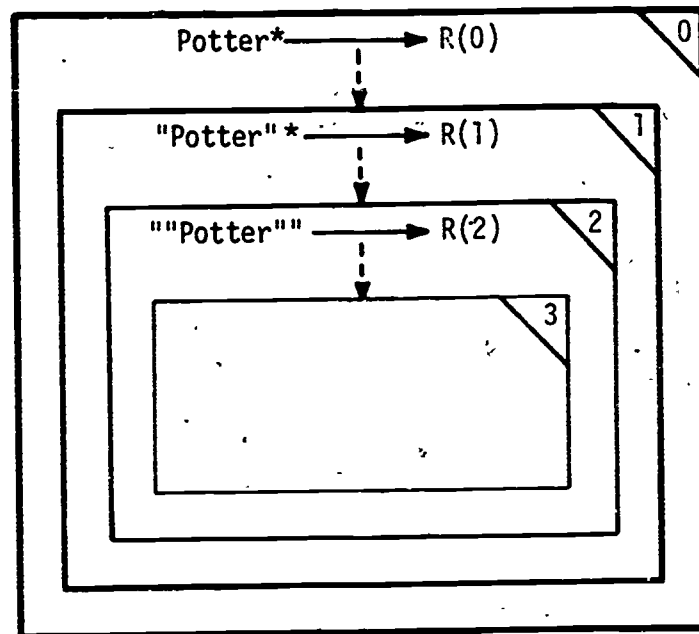
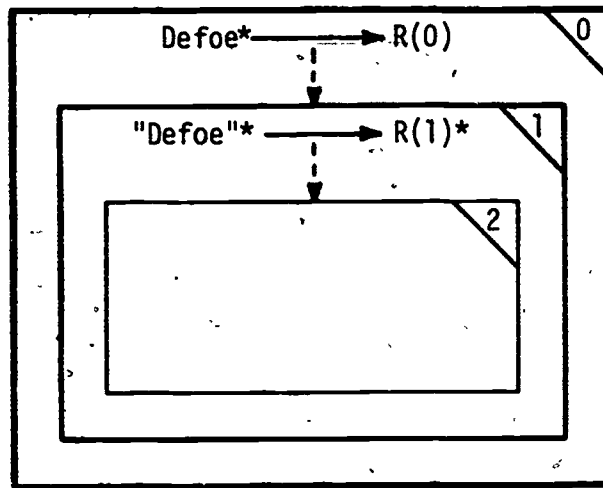


Figure 6. The rhetorical structure for Peter Rabbit (B. Potter), showing the use of commentary.

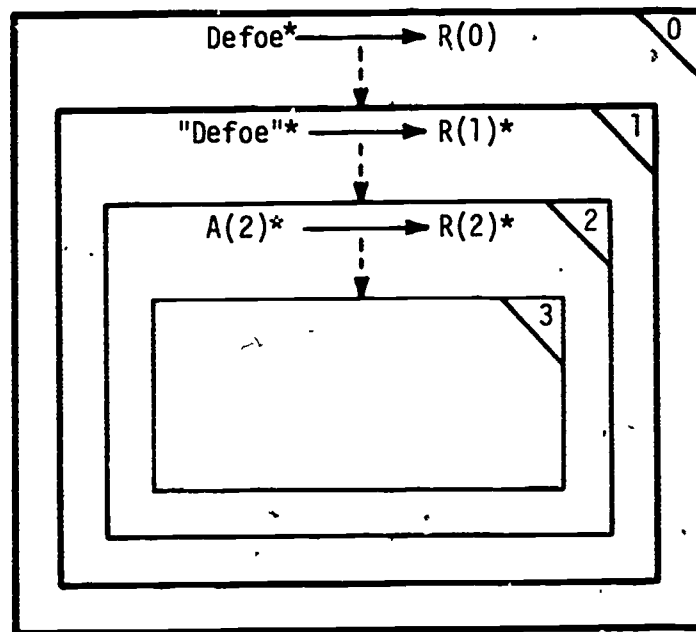
ridiculous, or short-sighted, then we may infer the presence of a higher level implied author or narrator. For example, Defoe's pamphlet, "The Shortest Way with Dissenters," appears at first to be an argument for the extermination of dissenters (see Booth's, 1961, discussion). A closer reading, however, shows that he has made the argument in order to ridicule it. If we were to interpret it as a sincere argument then we would construct the rhetorical structure shown in Figure 7(a), which is a Level 1 direct plan communication. On the other hand, if we view the piece as ironic; then we interpose a second implied author, as shown in Figure 7(b). In a narrative text, or any text with more than a Level 1 structure, irony does not necessarily introduce an additional level, but may use the existing levels instead. For instance, irony can be seen in Gulliver's Travels in the distance between the Level 2 narrator and the Level 1 implied author (see Figure 8). Irony usually implies the argumentation form at Level i, but any of the basic five forms could appear at Level i+1.

Introduction of an Unengaged Narrator

The fourth device for creating additional levels is the introduction of an unengaged narrator, that is, a character who narrates but is not a participant in the story. The effect is similar to that produced by commentary as in The Tale of Benjamin Bunny. However, it is usually assumed that the distance from the implied author at Level i to the implied author at Level i+1 is



(a)



(b)

Figure 7. Two rhetorical structures for The Shortest Way with the Dissenters (D. Defoe); (a) is for an interpretation of the work as non-ironic and (b) is for an interpretation that includes irony.

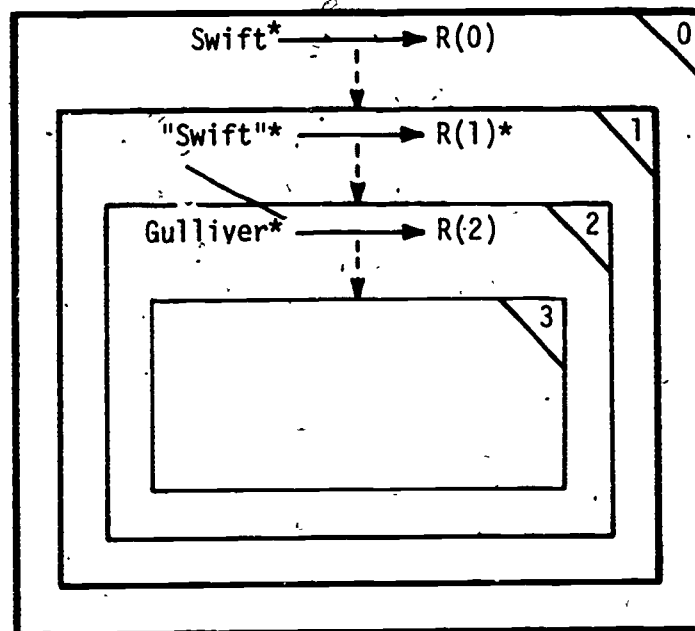


Figure 8. The rhetorical structure for Gulliver's Travels (J. Swift), showing the use of an engaged narrator and irony.

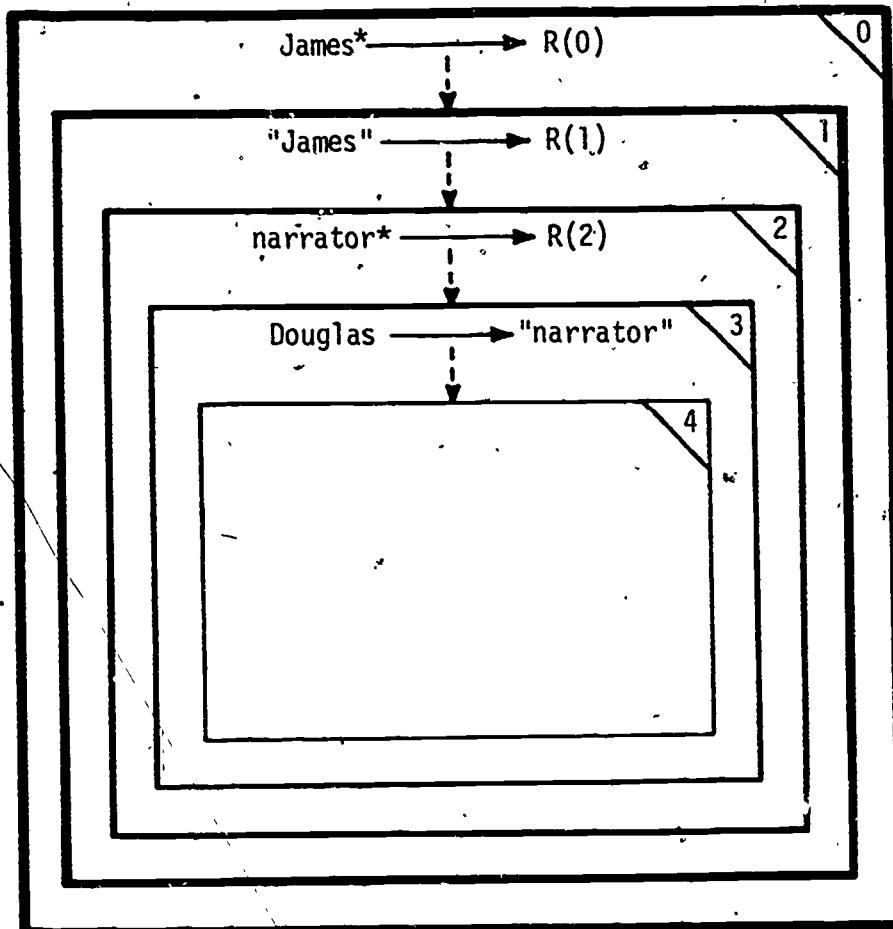
greater in the case of unengaged narration than for commentary, e.g., we think of "Potter"'s persona as being very similar to "Potter," whereas an unengaged narrator, such as Douglas in James's The Turn of the Screw, may be distant from the implied author, one level up.

In The Turn of the Screw, the first narrator gives a participant account of his encounters with Douglas. Douglas, in turn, begins to tell, and then reads, a ghost story written by the governess. When Douglas is just telling the governess's story, we have a participant account at Level 2 and an observer account at Level 3, as shown in Figure 9(a). When he begins to read her story we have an explicit embedding creating a new story-telling at Level 4. There is then a participant account at Level 2, a participant account at Level 3 (since Douglas is now a participant, the story receiver at Level 4), and an embedded text with participant account at Level 4, as shown in Figure 9(b). Most of the text is as shown in (a) with Jim Hawkins narrating, but three chapters are narrated by the doctor as shown in (b).

For unengaged narration, the form at Level $i+1$ is, as might be expected, always the observer account; the form at Level i is typically observer account or participant account.

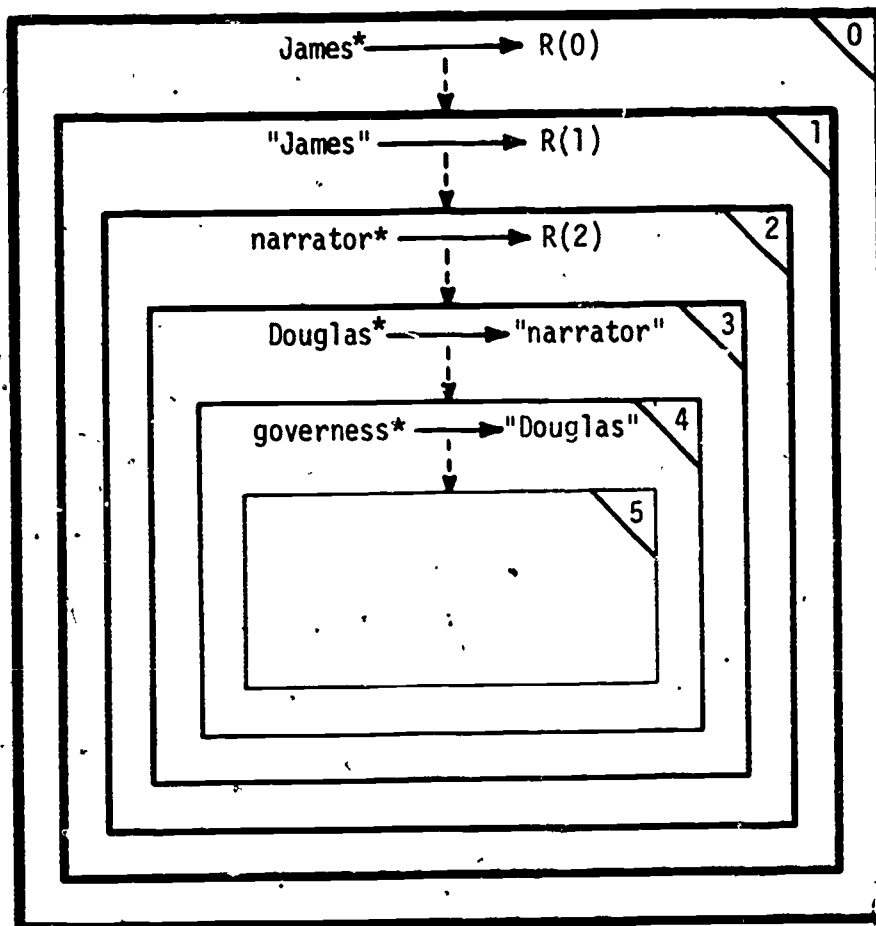
Introduction of an Engaged Narrator

Introducing an engaged narrator is another way to create an additional level of rhetorical structure. It is easily



(a)

Figure 9a. The rhetorical structure for the first part of the text of The Turn of the Screw (H. James), with engaged narration and unengaged narration.



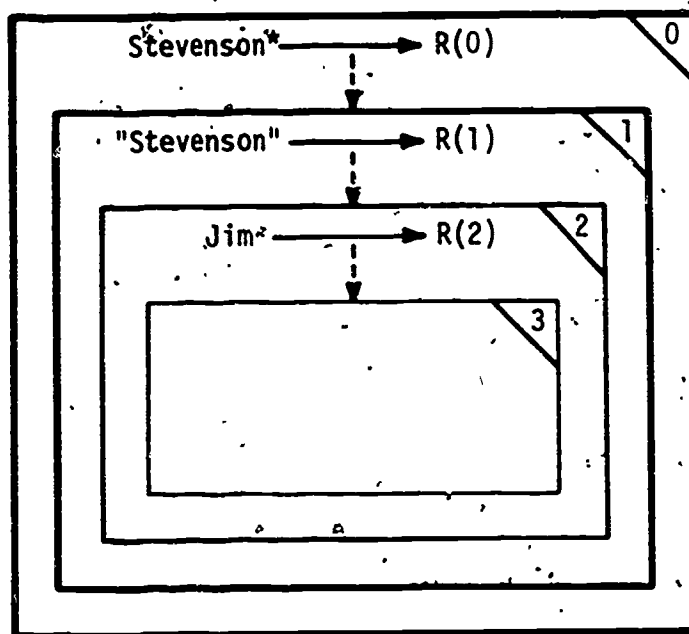
(b)

Figure 9b. The rhetorical structure for the second part of the text of *The Turn of the Screw* (H. James), with two examples of engaged narration and one explicit embedding.

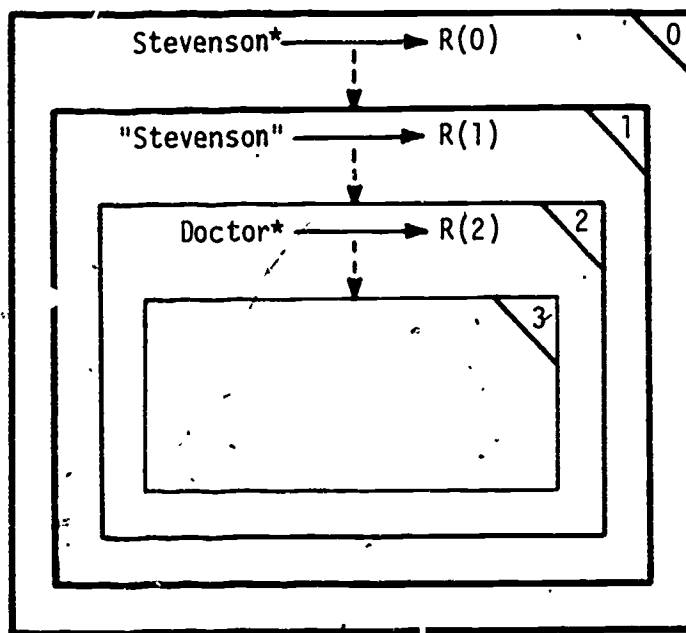
recognizable since the narration is in the first person. Engaged narration also facilitates irony since it permits the presentation of a fully defined story teller at a level separate from the implied author. It also provides a convincing rationale for exploring one character's perceptions in depth. However, the deep examination of one character is coupled with a shallower look at other characters. Furthermore, not all events can be presented conveniently since the narrator is necessarily limited in his or her physical presence. Limitations of this sort have led to interesting stratagems by authors. In Treasure Island, Stevenson resorts to a blatant switch of engaged narrators, that is, most of the story is told by Jim Hawkins, as shown in Figure 10(a), but three chapters are related by the doctor, as shown in Figure 10(b). The three chapters are simply labeled "Narrative continued by the doctor". Actually, Jim is supposedly writing down his account, so that we perhaps should classify the story as one of explicit embedding with Jim as a Level 2 implied author. It is not completely clear how to classify the doctor's role. The form at Level i for engaged narration is typically observer account, the form at Level i+1 is participant account.

Immersion

Immersion is another device for creating additional levels. It occurs when a narrator or implied author puts the reader into a story using second person pronouns or imperatives. John McPhee



(a)



(b)

Figure 10. Two rhetorical structures for Treasure Island (R. L. Stevenson), showing the shift in engaged narrators. Most of the text is as shown in (a) with Jim Hawkins narrating, but three chapters are narrated by the doctor as shown in (b).

uses immersion at various points in The Survival of the Bark Canoe in order to move the reader into greater involvement with canoeing. One case illustrates the phenomenon of changing rhetorical structure and immersion as well. In a description of birch bark canoe-building we see sentences such as: "Where a rib is not quite right, Henri tries another. . . . He trims the bark at the ends and sews roots around the stempieces. . . . All that is left is to find a porcupine. Take some quills. Commence the decorations." (p. 54) (The italics here are mine.) Notice that we start with an observer account of a well-defined individual, "Henri," then move to a rather neutral "he," then to an exposition that merely describes steps in a process, and finally, to an immersion of the reader in the process.

One could argue that if the reader chooses to become engaged when immersion is used then no additional level is created; we would simply indicate that the implied reader is engaged at Level i+1. On the other hand, recognition of the use of immersion can lead the reader to feel the presence of a new character, the reader who is engaged, as opposed to the original implied reader. Thus we get two implied readers as shown in Figure 11.

In-Effect Narration

In some stories, we see the world so much through the mind of one character that we feel that he or she is in effect narrating the story. This causes an extra level to be

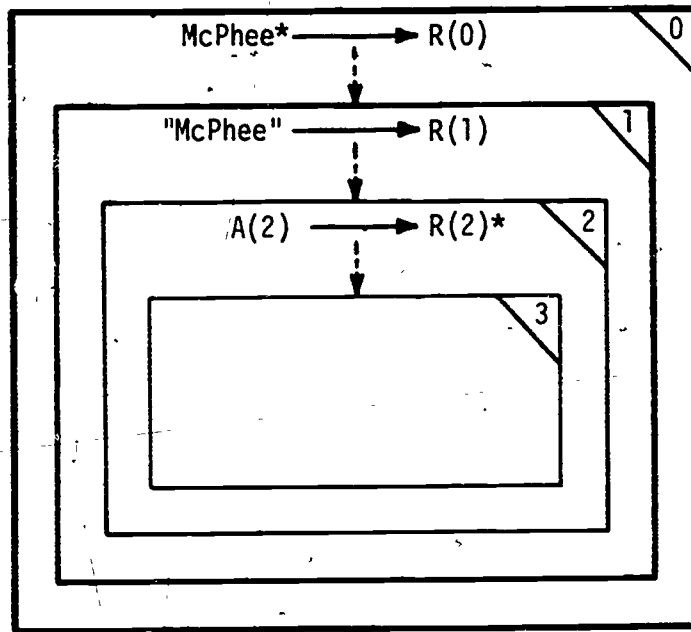


Figure 11. The rhetorical structure for a small portion of The Survival of the Bark Canoe (J. McPhee), showing the use of immersion.

constructed. We refer to the device as in-effect narration and symbolize it by showing the character talking to himself or herself as in the diary form, telling a story at Level $i+1$. Note that with the additional level we can begin to ask about the reader's involvement with characters at Level $i+2$. For the in-effect narration of James's The Ambassadors, we have the structure shown in Figure 12.

Plan Communication

Characters in a story typically need to communicate either their real plans or fictitious (virtual) plans to other characters (Bruce, 1980; Bruce & Newman, 1978). It is rare that these plans are ever expressed in full. Instead, each character acts and speaks so as to give the observers enough information to construct the appropriate model (perhaps a misleading model) of his or her goals, as well as the plans for achieving those goals. In effect, the character who is communicating a plan acts as an author, giving bits of the underlying "story" in the expectation that the observer will be a successful "reader" and infer the intended structures. At Level $i+1$ this interaction then begins to look much like the level one form we called "argumentation," which is a similar direct attempt to influence the reader. Level i is restricted to observer account, participant account, or argumentation.

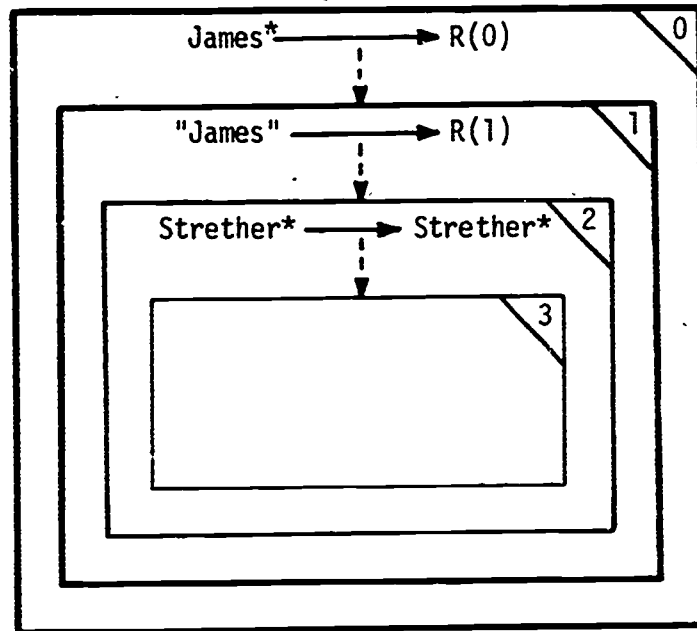


Figure 12. The rhetorical structure for The Ambassadors (H. James), showing in-effect narration.

A good example of plan communication can be found in the double deception in "Hansel and Gretel," in which Hansel pretends to be deceived. It can be said to have the structure shown in Figure 13. Although the parents are not explicit narrators, and, in fact, do not want to be perceived as such, they do tell a story, one in which they are principal characters along with Hansel and Gretel. Hansel, in turn, implicitly tells a story in which he is the implicit and gullible narratee for their story. In order to comprehend "Hansel and Gretel," we need to understand the actions of the parents, Hansel, and Gretel at Level 4, but also their respective narrator and narratee roles at Levels 3 and 2.

Summary

The simplest written story still has three levels of rhetorical structure: the interaction between the real author and the real reader (Level 0), the interaction between the implied author and the implied reader (Level 1), and the "story itself" (Level 2). As we outlined in the previous section, the interaction at Level 1 (the implied author level) can be in any of five basic forms. An interaction at Level 2, 3, 4, and so on, in a text with many levels is also in one of the five basic forms. Thus, the basic forms appear repeatedly in the examples (Figures 4 through 13).

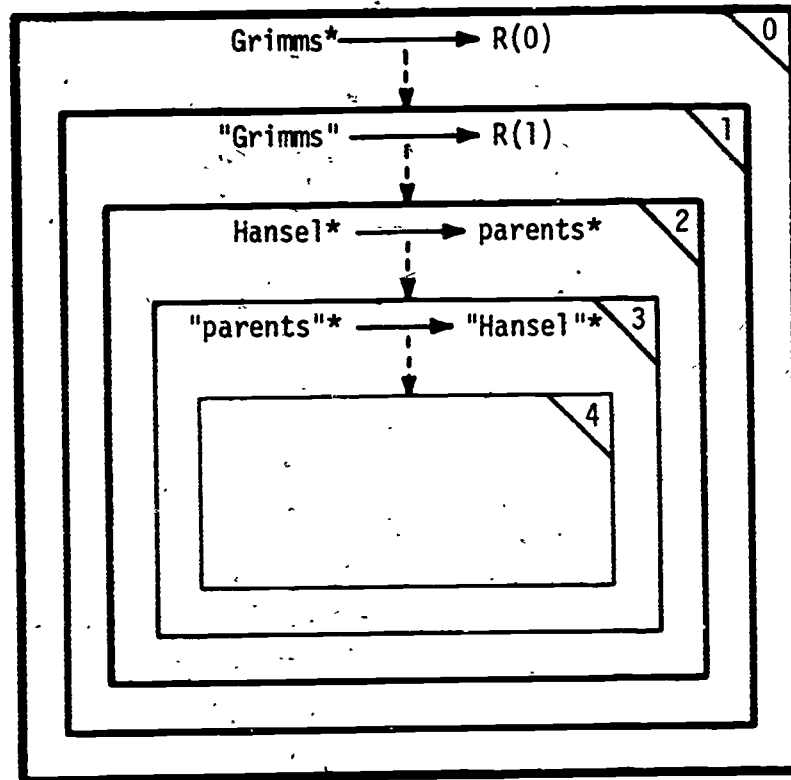


Figure 13. The rhetorical structure for Hansel and Gretel (The Brothers Grimm), showing double deception in the communication of plans.

We can also talk, however, about the device used in creating each additional level. For example, in The Turn of the Screw (Figure 9), we find an observer account at Level 1, a participant account at Level 2, an observer account at Level 3, and a participant account at Level 4. The device that creates Level 2 is the introduction of an engaged narrator; the device that creates Level 3 is the introduction of an unengaged narrator; and the device that creates Level 4 is explicit embedding. As this example illustrates, the devices have natural correspondences to the basic forms at both the original and the added level. The particular correspondence depends on the device. For instance, introduction of an engaged narrator directly implies that the basic form at the added level will be participant account. Explicit embedding, on the other hand, allows participant account, but also any of the four other basic forms. The devices and constraints on the basic forms are summarized in Table 3.

That the devices and basic structures presented here imply parallels between the author-reader interactions and character-character interactions should not be surprising. The model assumes that similar processes are used by all the persons, personae and characters, involved in the complex net of communication implied by a text. Furthermore, the devices and the basic forms reappear in similar ways since what is useful at one level can be found useful at embedded levels. In the next section we explore some of the reasons for these structures.

Table 3

Devices and Constraints on Basic Forms

<u>Generative Device</u>	<u>Level <i>i</i> Form</u>	<u>Level <i>i</i>+1 Form</u>
explicit embedding	observer account	any
commentary	any	any
irony	argumentation	any
unengaged narrator	observer account or participant account	observer account
engaged narrator	observer account or participant account	participant account
immersion	any	reader immersion
in-effect narration	any	diary
plan communication	observer account, participant account, or argumentation	argumentation

Using Stories to Communicate

One of the most powerful ways to communicate is to tell a story. A good story with conflicts, surprises, and suspense can engage the listener and make him or her an active participant in the transmission of ideas implicit in the story. It is no accident that the core values of many religions, political institutions, and other cultural systems are found encapsulated in stories (Newall, 1979).

And yet, listening to or reading a story is not a simple task. As the model of reading presented here would suggest, a reader must become deeply involved with the beliefs and intentions of the implied author and determine this person's relationship with the implied reader. Layers of embedded stories with their corresponding implied authors and implied readers only complicate the task of the real reader. On the other hand, this very complexity provides more persons to come alive for the reader and make him or her care about what is being said. This is one clue to the effectiveness of story-telling as communication; by inducing active involvement of the reader, the story form ensures that the reader is working at making the communication successful.

Another source of the story's power follows from the presence of the active reader. In order to cope with the numerous details of a story, the reader looks for a unity, or a pattern of connectedness (Bateson, 1978). Burnshaw (1970)

describes the "act of uniting" in which the thoughts and feelings evoked by reading are brought together into a satisfying whole. This act on the part of the reader means that the bare elements of the story (if one can speak of such a thing) are amplified far beyond their "literal" meaning. In other terms, one might say that story understanding requires the invocation of complex schemata from limited data (Bartlett, 1932; Rumelhart and Ortony, 1977). The richness of the story and character schemata that are invoked makes a story one of the most information packed forms of communication.

One type of pattern that a story suggests should be singled out, namely, the patterns of real world social interactions. Since stories are by, for, and about people (or people substitutes, like rabbits or robots), the interactions they present are potent symbols for real life. Through stories, we can tell to others or learn from others useful things about social life.

All of these explanations for the effectiveness of story-telling as communication apply to one-level stories as well as stories with multiple embedded layers. This raises the question of the reason for having embedded stories. What is achieved by having the author present her or his story through another's voice?

Delight in artifice is one reason for having complex or unusual rhetorical structures. Many readers are fascinated by

the shifting and complex relationships among implied authors and implied readers, narrators, and narratees in such stories as Daniel Martin (Fowles), Chimera (Barth), or The Golden Notebook (Lessing). Beatrix Potter's stories for children, such as The Tale of Benjamin Bunny, exhibit a similar cleverness. The artifice in these stories has other effects as well, but we cannot ignore the simple pleasure a reader may get in encountering the structure itself. This pleasure may derive from the satisfaction of curiosity, or perhaps, from the exercise of cognitive faculties in unraveling the puzzles introduced by multiple levels. In any case, the pleasure then contributes to the reader's engagement in the communication process.

A related reason for embedded rhetorical structures is to create the feeling of an exotic experience. By interposing a narrator or an additional implied author, the current narrator or implied author can gain credible access to foreign or inaccessible knowledge. The interposed speaker, for example, the mariner in Coleridge's "The Rime of the Ancient Mariner," can have had adventures that neither the author nor the reader might be expected to have. Alternatively, the speaker can be from another time (100 years ago) or another place (Mars) than that inhabited by the implied author and reader.

In general, multiple narrators are often used to present different perspectives on the same events. The narrators can be on different levels, as in "Rip Van Winkle," or on the same level

at different places in the text, as in Faulkner's The Sound and the Fury, or Cleary's Ramona the Brave. As we discussed earlier, Stevenson uses two narrators at the same level of embedding in Treasure Island, each of whom has access to knowledge unavailable to the other.

In certain cases, making the story believable seems to be a major motivation for having an interposed narrator or implied author. In "Rip Van Winkle," for example, Irving does not have to tell the fantastic tale; he merely introduces us to Diedrich Knickerbocker. Knickerbocker, in turn, lets us know that he has only relayed the story to us from other, quite reliable narrators.

The attribution of a story to another can make it seem more believable; it is also a way to remove the implied author from responsibility for his text. This has often been done by authors for political reasons, in particular, to avoid conflict with some social values and their defenders. Galileo, for instance, presented the new astronomy through a fictional conversation in Dialogue Concerning the Two Chief World Systems. His device unfortunately was unsuccessful in that the authorities for the Inquisition attributed the characters' opinions not just to the characters or the implied author, but to Galileo himself.

Another reason for levels of narration is to achieve irony -- to present a case fully in order to demolish it. We have already discussed one example, Defoe's "The Shortest Way with the

Dissenters." Another famous example is Swift's "A Modest Proposal." These pamphlets (discussed by Booth, 1961) argue for extermination and child-cannibalism respectively, but they do so in order to ridicule them and their political bases. In each case, irony is achieved by the contrast between the Level 1 and the Level 2 implied authors. Irony can also occur in the contrast between a Level 1 implied author and a Level 2 narrator. Huckleberry Finn (in The Adventures of Huckleberry Finn), for example, does not always share the views of Mark Twain's persona. Similarly, some real readers infer that Gulliver's views are different from those of Swift's persona.

The type of irony just described involves a contrast between descriptions that might be given by implied authors at different levels. Sometimes contrast serves other purposes, as in October Light by Gardner, wherein Sally Page Abbott reads another novel. The contrast between her life and the life portrayed in the novel is used to highlight observations about life in general. For example, events in the embedded novel have a fantastic quality that leads Sally to observe that things don't happen that way in real life, that is, in the life portrayed by the Level 1 implied author, Gardner's persona. Thus, interactions between the Level 1 and the Level 2 narrations are intended to give us insights about Level 0, the real world.

The examples of irony and contrast might also be described in terms of the author's ambivalence. One has a feeling in

October Light that although the embedded novel is used for contrast effects, and although it is treated ironically, that Gardner also enjoyed writing just that sort of novel, despite all its "deficiencies" and differences from his "real" novel. It may well be that in cases of irony and other multiple level communications that both the reader and the author achieve a satisfaction from the expression of two contradictory feelings or thoughts through the use of two levels at once.

The relation between fiction and reality is explored in other stories. In Tristram Shandy (Sterne) we read about the author's writing a book which is the book we are reading. Such books cause us to focus on the relevance of the story to real life, and perhaps, to view our real lives in the terms of literature (see Holland, 1968). The character to character discussions of mythotherapy in The End of the Road (Barth) revolve around this issue of "what is real" and to what extent life and literature are similar.

Finally, one of the strongest reasons for having embedded narrations is that stories are about people who need to communicate. Since any character, for reasons such as those just given, may also find a value in story-telling, any story can give rise to another story. Meaning can be created for each story-written-within-a-story and for the interactions between stories at different levels. Thus embeddings occur, both because they serve the author's purposes directly, and because story

telling serves the purposes of the characters created in these stories.

Further Development

The phenomena explained by the model are but a small portion of the richness of literature. We have not begun to account for character development, artistic unity, theme, meter, persuasiveness, allegory, or numerous other aspects of written texts. On the other hand, the model is useful in analyzing some phenomena other than those explicitly discussed thus far.

For example, distance is a familiar concept in literary criticism (see Booth, 1961). It refers to the moral, physical, psychological, intellectual, or aesthetic opposition between, say, a narrator and the characters in the story she or he relates. The social interaction model may be useful in isolating the various participants involved in a narrative, and thereby, the different pairs for which distance considerations are appropriate.

Distance considerations are often intricate and subtle, even, or perhaps especially, in books for children. For example, Milne's Winnie-the-Pooh (Figure 14) poses a number of interesting questions about the relationship of authors to authors, authors to readers, readers to characters, and so on. The first person narration appears to me to be by Christopher Robin's father, a character who is close, but not identical to, the Level 1 implied

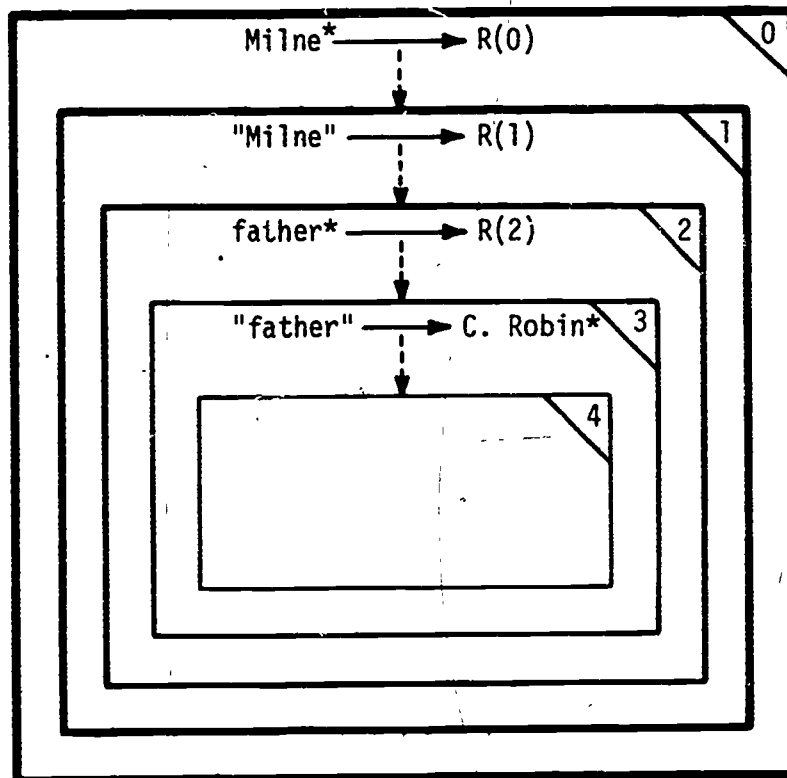


Figure 14. The rhetorical structure for Winnie-the-Pooh (Milne), showing the introduction of an engaged narrator and immersion.

author, "Milne." The narrator speaks first to the Level 2 implied reader, and then to Christopher Robin, who is the Level 3 implied reader, but also a character in the Level 4 stories that the narrator tells. In reading the book we wonder about the distance between the two versions of Christopher Robin and between them and the implied reader at Level 2. It soon becomes clear that these multiple listeners enrich the story. When Owl explains that "the customary procedure" means "the thing to do" we can empathize with his listener, Pooh, or with Christopher Robin, or with implied readers at Levels 2 or 1. This sets up various forms of irony. Also, the existence of the multiple levels of listeners may provide a partial explanation for the appeal of the book to readers of different ages. (Let's save for another time a discussion of how the structure as shown in Figure 14 would mesh with a real social interaction set up by someone reading Winnie-the-Pooh to a child).

A number of other phenomena could be examined in terms of the model. For example, non-written forms of communication also exhibit story telling features and complex rhetorical structures. A popular song has the lines, "You're so vain, you probably think this song is about you." Who is the song about? Are there two implied listeners, one who is vain and one who is not? In fact, the example illustrates the generalization that most songs have two levels of implied listeners. There is the apparent listener, at Level 2, who has left forever, etc., and the true implied

listener at Level 1, who is not expected to be intimately involved with the singer. This gives the structure shown in Figure 15. In the figure, "singer" represents the role taken on by the real singer when she or he steps out on a stage, and "singer" is the second level role taken on by playing the part implied by the song. R(2) is the one to whom the song is apparently addressed, who, as we have said, may exist only in the story implied by the song.

Structures of this kind can easily be imagined for movies and other dramatic forms. An interesting example is Stoppard's play, The Real Inspector Hound, in which the characters Birdboot and Moon move from being members of the audience for a play within the play to being characters within that play. Their actions give us reason to wonder where the boundaries lie between audience and performer, real life and fiction. Another interesting case is the making of a movie within a movie, as in Singing in the Rain. Chatman (1978) gives a good discussion of some of the relationships between various narrative forms, from comic strips to Shakespearean theatre.

We could go even further, and apply the model to aspects of real social interactions that do not involve explicit story telling. Just as the interactions among characters in a story can be viewed as implicit story telling, so can the interactions of any participants in a social setting. For example, when people engage in ritualized interactions, such as pretending in

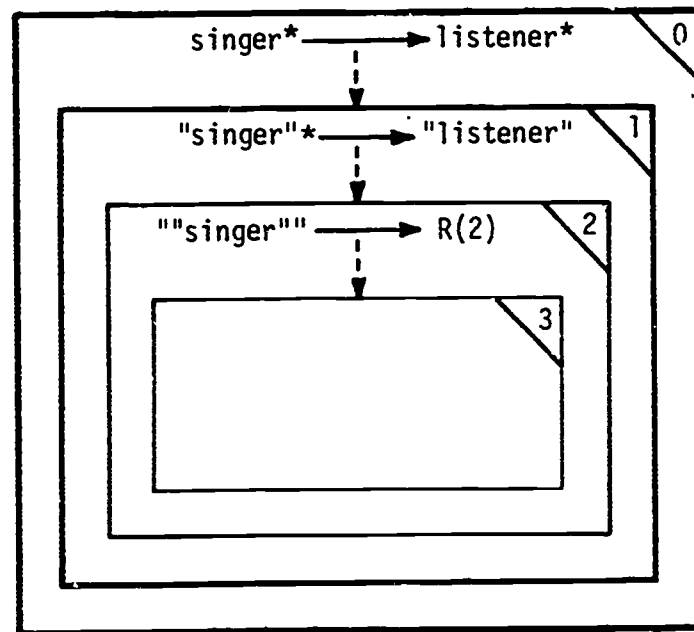


Figure 15. The rhetorical structure for a typical pop song.

children's play, their acts and beliefs begin to take on the character of embedded stories, wherein their ritual roles are like the character roles in stories.

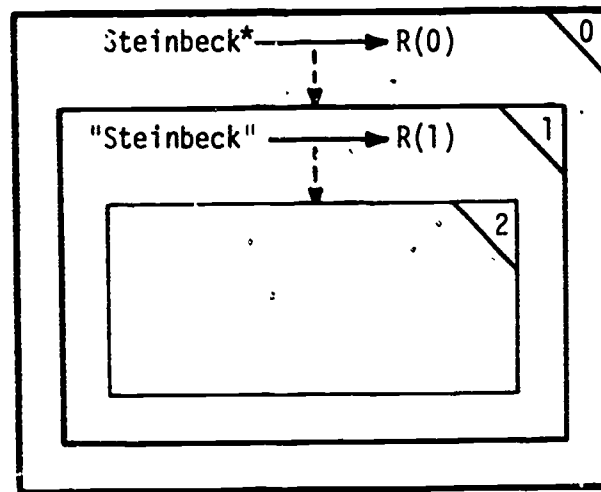
Finally, there are many aspects of the model itself which need to be developed. We have barely touched, for example, on the issue of crosstalk, or communication across levels. It is a disquieting phenomenon since it seems to violate some presuppositions about rhetorical structures. The simplest form occurs when the author appears to shift levels. For example, an author at Level 1 can refer to her or his interaction with the reader at that level by focussing on the linguistic aspects of the text, as in the expression, in the preceding paragraph. Reference to Level 0 can be achieved by a focus on the physical aspects as in on the preceding page. Such an expression shifts attention from the implied communication level to the actual physical event of reading. The same author can focus the discourse on Level 2 by expressions which emphasize story level events, such as on the previous day.

More complex forms of crosstalk occur when implied authors begin to converse with their characters, as in Letters (Barth). There are also examples of participants in embedded stories hearing of things that should only be known to participants in outer stories. Several interesting examples of this can be found in Hofstadter (1979) along with a discussion of recursion of various sorts. An especially good example is his story, "Little Harmonic Labyrinths."

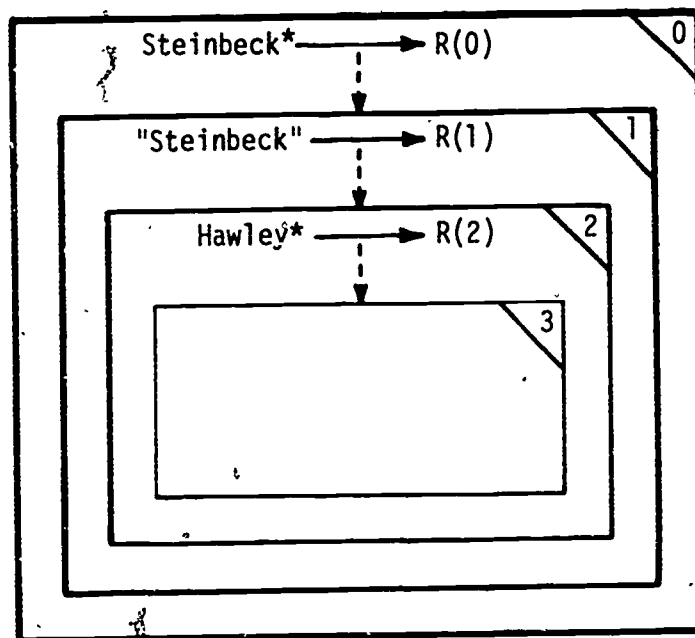
Another line of development is suggested by the Treasure Island example discussed earlier, wherein the rhetorical structure shifts. Rhetorical structure shifts happen in many ways and for different reasons. A common pattern is to go from third to first person, thus signaling a new level of embedding. For example, in Steinbeck's The Winter of Our Discontent, Ethan Allen Hawley becomes the narrator in the third chapter after being just another character in the first two. This implies a two step rhetorical structure as shown in Figure 16. When Hawley does become the narrator, we have to concern ourselves with him in that role as well as the role he had already assumed as a major character.

Conclusion

We often think of reading as solitary activity in which the reader more or less successfully draws information from a text. The information may be in the form of an argument intended to convince the reader of some proposition, in the form of a narrative intended to enlighten, in the form of a description intended to entertain or instruct, or in any of various other forms with corresponding assumed intentions. In any case, we often assume, the text contains information and the task for the reader is to glean as much as possible of that information, all of which was supposedly put in the text by the author.



(a)



(b)

Figure 16. Two rhetorical structures for The Winter of Our Discontent (J. Steinbeck), showing a shift in structure upon the introduction of the engaged narrator.

This view of reading leads us to focus on questions such as: How does the reader perceive words? How successful has the reader been in recovering the information in the text? Or, what is the structure/content of a given text? Questions like these have spawned numerous studies on cognitive processes during reading, on visual perception, and on factors in texts affecting comprehension of and memory for the information "contained" therein. Exemplars of this view can be found in fields as diverse as poetics, linguistics, cognitive psychology, artificial intelligence, anthropology, sociolinguistics, philosophy of language, aesthetics, and, of course, reading research. It has also influenced our ideas about how to teach reading and how to test for comprehension. What has emerged from this work is a rich body of knowledge about texts and reading that could form an important part of any model of the reading process.

But an important dimension of reading is often overlooked when one takes the information-in/information-out view as characterized above. To put it simply: a text is written by someone; it is read by someone; and, when the text is read, meaning can be created. What we call the "structure of a text" is not some characteristic that blossoms forth from a particular string of sentences. In fact, it is not a property of sentences or texts at all, but rather, an attribute conferred on the text by a reader on the basis of the "meaning of the text", which, in turn, is created by the reader in the process of reading.

Holland (1975) and Postman and Weingartner (1969) show what a rich and powerful activity this meaning-making can be. Texts are written by authors who expect meaning-making on the part of readers and read by readers who do the meaning-making.

The social interaction model of reading presented here represents an attempt to follow out some of the implications of the meaning-making view of reading. This has led us away from accounts of reading which imply a determinate relation between text structure and meaning. It is too early to tell whether the model will lead us to important new insights about reading. What I hope for now is that it can be useful as a tool for exploring the realm of interactions between people engaged in reading and writing.

References

- Adams, M. J., & Bruce, B. Background knowledge and reading comprehension. In J. Langer & T. Smith Burke (Eds.), Author meets reader/A psycholinguistic perspective: Bridging the gap from theory to practice. Newark, Del.: International Reading Association, in press.
- Bartlett, F. C. Remembering. Cambridge: Cambridge University Press, 1932.
- Bateson, G. The pattern which connects. The CoEvolution Quarterly, Summer 1978, pp. 5-15.
- Bettelheim, B. The uses of enchantment: The meaning and importance of fairy tales. New York: Knopf, 1976.
- Booth, W. C. The rhetoric of fiction. Chicago: University of Chicago Press, 1961.
- Bruce, B. C. A model for temporal references and its application in a question answering program. Artificial Intelligence, 1972, 3, 1-25.
- Bruce, B. C. Analysis of interacting plans as a guide to the understanding of story structure. Poetics, 1980, 9, 295-311.
- Bruce, B. C., & Newman, D. Interacting plans. Cognitive Science, 1978, 2, 195-233.

- Burnshaw, S. The seamless web. New York: Braziller, 1970.
- Chatman, S. Story and discourse. Ithaca: Cornell University Press, 1978.
- Cohen, P. R., & Perrault, C.R. Elements of a plan-based theory of speech acts. Cognitive Science, 1979, 3, 177-212.
- Ervin-Tripp, S., & Mitchell-Kernan, C. Child discourse. New York: Academic Press, 1977.
- Fitzgerald, F. America revised. Boston: Little, Brown & Co., 1979.
- Goffman, E. Strategic interaction. New York: Ballantine Books, 1969.
- Goffman, E. Frame analysis: An essay on the organization of experience. New York: Harper & Row, 1974.
- Harre, R., & Secord, P. F. The explanation of social behavior. Totowa, N.J.: Littlefield, Adam, 1973.
- Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.
- Hofstadter, D. R. Godel, Escher, Bach: An eternal golden braid. New York: Basic Books, 1979.

- Holland, N. The dynamics of literary response. New York: Norton, 1968.
- Holland, N. 5 readers reading. New Haven, Conn: Yale University Press, 1975.
- Huber, M. B. Story and verse for children. New York: Macmillan, 1940.
- Newall, V. Tell us a story. New Scientist, July 5, 1979.
- Perrine, L. Story and structure. New York: Harcourt, Brace & World, 1966.
- Postman, N., & Weingartner, C. Teaching as a subversive activity. New York: Dell, 1969.
- Prince, G. Notes toward a categorization of fictional 'narratees.' Genre, 1971, 4, 100-105.
- Reichenbach, H. Elements of symbolic logic. Toronto, Ontario: Macmillan, 1947.
- Rubin, A. D. A framework for comparing language experiences (with particular emphasis on: The effect of audience on discourse models). In D. Waltz (Ed.), Theoretical Issues in Natural Language Processing-2. New York: Association for Computing Machinery, 1978.

Rubin, A. D. A theoretical taxonomy of the differences between oral and written language. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), Theoretical issues in reading comprehension. Hillsdale, N.J.: Erlbaum, 1980.

Rumelhart, D. E., & Ortony, A. The representation of knowledge in memory. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), Schooling and the acquisition of knowledge. Hillsdale, N.J.: Erlbaum, 1977.

Sessions, R. The musical experience of composer, performer, listener. Princeton, N.J.: Princeton University Press, 1950.

Shahn, B. The shape of content. Cambridge: Harvard University Press, 1957.

Sudnow, D. Studies in social interaction. New York: Free Press, 1972.

Literary References

Barth, J. Chimera. New York: Random House, 1972.

Barth, J. Letters. New York: Putnam, 1979.

Barth, J. The end of the road. New York: Doubleday, 1967.

Benet, S. V. The Devil and Daniel Webster. New York: Holt, Rinehart & Winston, 1937.

Cleary, B. Ramona the brave. New York: Morrow, 1975.

Coleridge, S. T. The rime of the ancient mariner. New York: Duell, Sloan, and Pierce, 1966.

Defoe, D. The shortest way with the dissenters and other pamphlets. Oxford: Blackwell, 1927.

Faulkner, W. The sound and the fury. New York: Random House, 1929.

Fowles, J. Daniel Martin. Boston: Little, Brown, 1977.

Fowles, J. The magus. Boston: Little, Brown, 1966.

Galileo, G. Dialogue concerning the two chief world systems. Berkeley: University of California Press, 1953.

- Gardner, J. C. October light. New York: Knopf, 1976.
- Grimm, J. K. L. Hansel and Gretel. Grimm's fairy tales. New York: Pantheon Books, 1944.
- Hawthorne, N. Young Goodman Brown. In N. Arvin (Ed.), Hawthorne's Short Stories. New York: Knopf, 1946.
- Irving, W. Rip Van Winkle and the legend of Sleepy Hollow. New York: Macmillan, 1925.
- James, H. The ambassadors. New York: Norton, 1964.
- James, H. The turn of the screw. New York: The Modern Library, 1930.
- Lessing, D. The golden notebook. New York: Simon & Schuster, 1962.
- McPhee, J. A. The survival of the bark canoe. New York: Farrar, Straus, Giroux, 1975.
- Milne, A. A. Winnie-the-Pooh. London: Methuen, 1926.
- Packard, E. Deadwood city. New York: Packet Books, 1978.
- Packard, E. Sugarcane island. New York: Lippincott, 1978.
- Potter, B. The tale of Benjamin Bunny. New York: Warne, 1904.

- Steinbeck, J. The winter of our discontent. New York: Viking, 1961.
- Sterne, L. Tristram Shandy. London: Oxford University Press, 1951.
- Stevenson, R. L. Treasure island. Cleveland, Ohio: World, 1946.
- Stoppard, T. The real Inspector Hound and after Magritte. New York: Grove Press, 1975.
- Swift, J. A modest proposal. Swift's satires and personal writings. London: Oxford University Press, 1932.
- Swift, J. Gulliver's travels. New York: Oxford University Press, 1933.
- Twain, M. The adventures of Huckleberry Finn. New York: Norton, 1961.

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Adams, M. J., Anderson, R. C., & Durkin, D. Beginning Reading: Theory and Practice (No. 3), November 1977. (ERIC Document Reproduction Service No. ED 151 722, 15p., PC-\$2.00, MF-\$.91)

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Anderson, R. C., & Freebody, P. Vocabulary Knowledge and Reading (No. 11), August 1979. (ERIC Document Reproduction Service No. ED 177 470, 52p., PC-\$5.30, MF-\$.91)

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Armbruster, B. B., & Anderson, T. H. Content Area Textbooks (No. 23), July 1981.

Asher, S. R. Sex Differences in Reading Achievement (No. 2), October 1977. (ERIC Document Reproduction Service No. ED 146 567, 30p., PC-\$3.65, MF-\$.91)

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Bruce, B. A New Point of View on Children's Stories (No. 25), July 1981.

Bruce, B. Stories within Stories (No. 29), August 1981.

Bruce, B., & Rubin, A. Strategies for Controlling Hypothesis Formation in Reading (No. 22), June 1981.

Bruce, B., Rubin, A., & Starr, K. Why Readability Formulas Fail (No. 28), August 1981.

Collins, A., & Haviland, S. E. Children's Reading Problems (No. 8), June 1979. (ERIC Document Reproduction Service No. ED 172 188, 19p., PC-\$2.00, MF-\$.91)

Davison, A. Readability--Appraising Text Difficulty (No. 24), July 1981.

- Durkin, D. Comprehension Instruction--Where are You? (No. 1), October 1977. (ERIC Document Reproduction Service No. ED 146 566, 14p., PC-\$2.00, MF-\$.91)
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- Durkin, D. Reading Comprehension Instruction in Five Basal Reader Series (No. 26), July 1981.
- Jenkins, J. R., & Pany, D. Teaching Reading Comprehension in the Middle Grades (No. 4), January 1978. (ERIC Document Reproduction Service No. ED 151 756, 36p., PC-\$3.65, MF-\$.91)
- Joag-dev, C., & Steffensen, M. S. Studies of the Bicultural Reader: Implications for Teachers and Librarians (No. 12), January 1980. (ERIC Document Reproduction Service No. ED 181 430, 28p., PC-\$3.65, MF-\$.91)
- McCormick, C., & Mason, J. What Happens to Kindergarten Children's Knowledge about Reading after a Summer Vacation? (No. 21), June 1981.
- Osborn, J. The Purposes, Uses, and Contents of Workbooks and Some Guidelines for Teachers and Publishers (No. 27), August 1981.
- Pearson, P. D., & Kamil, M. L. Basic Processes and Instructional Practices in Teaching Reading (No. 7), December 1978. (ERIC Document Reproduction Service No. ED 165 118, 29p., PC-\$3.65, MF-\$.91)
- Rubin, A. Making Stories, Making Sense (includes a response by T. Raphael and J. LaZansky) (No. 14), January 1980. (ERIC Document Reproduction Service No. ED 181 432, 42p., PC-\$3.65, MF-\$.91)
- Schallert, D. L., & Kleiman, G. M. Some Reasons Why Teachers are Easier to Understand than Textbooks (No. 9), June 1979. (ERIC Document Reproduction Service No. ED 172 189, 17p., PC-\$2.00, MF-\$.91)
- Steinberg, C., & Bruce, B. Higher-Level Features in Children's Stories: Rhetorical Structure and Conflict (No. 18), October 1980. (ERIC Document Reproduction Service No. ED 198 474, 27p., PC-\$3.65, MF-\$.91)
- Taylor, M., & Ortony, A. Figurative Devices in Black Language: Some Socio-Psycholinguistic Observations (No. 20), May 1981. (ERIC Document Reproduction Service No. ED 201 989, 23p., PC-\$2.00, MF-\$.91)
- Tierney, R. J., & LaZansky, J. The Rights and Responsibilities of Readers and Writers: A Contractual Agreement (includes responses by R. N. Kantor and B. B. Armbruster) (No. 15), January 1980. (ERIC Document Reproduction Service No. ED 181 447, 32p., PC-\$3.65, MF-\$.91)
- Tierney, R. J., Mosenthal, J., & Kantor, R. N. Some Classroom Applications of Text Analysis: Toward Improving Text Selection and Use (No. 17), August 1980. (ERIC Document Reproduction Service No. ED 192 251, 43p., PC-\$3.65, MF-\$.91)
- Tierney, R. J., & Pearson, P. D. Learning to Learn from Text: A Framework for Improving Classroom Practice (No. 30), August 1981.

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- Alessi, S. M., Anderson, T. H., & Biddle, W. B. Hardware and Software Considerations in Computer Based Course Management (No. 4), November 1975. (ERIC Document Reproduction Service No. ED 134 928, 21p., PC-\$2.00, MF-\$.91)
- Alessi, S. M., Anderson, T. H., & Goetz, E. T. An Investigation of Lookbacks During Studying (No. 140), September 1979. (ERIC Document Reproduction Service No. ED 177 494, 40p., PC-\$3.65, MF-\$.91)
- Anderson, R. C. Schema-Directed Processes in Language Comprehension (No. 50), July 1977. (ERIC Document Reproduction Service No. ED 142 977, 33p., PC-\$3.65, MF-\$.91)
- Anderson, R. C., & Freebody, P. Vocabulary Knowledge (No. 136), August 1979. (ERIC Document Reproduction Service No. ED 177 480, 71p., PC-\$5.30, MF-\$.91)
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